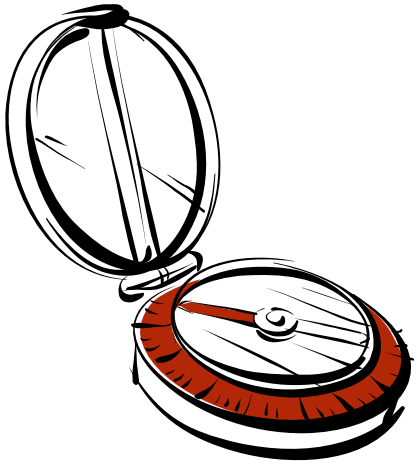
Central Washington University
Ellensburg, Washington
Department of Physical and Health Education

Orienteering Unit Plan



By:
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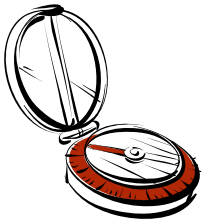
Course Materials



Orienteering Block Plan

	Monday	Tuesday	Wednesday	Thursday	Friday
Week One	#1 Teamwork Activities Assessment 1	#2 Teamwork Activities	#3 Teamwork Activities	#4 Cardinal Directions Assessment 2 Task Card 1	#5 Developing scenery awareness Assessment 3
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Orienteering Equipment List

(**Included in the unit already)

- 15 bandanas
- 30 pencils
- 34 cones
- 1 cd player
- Song: “Getting Jiggy Wit It” by Will Smith
- 30 compasses
- 1 demonstration compass
- 6 balloons
- 20 poly spots
- 1 overhead projector
- 1 drum or pair of rhythm sticks
- 4 2x4 boards
- 12 pieces of 3ft. long rope
- 36 dome cones (6 each of 6 different colors)
- 10 scarves
- 4 plumbing pipes (4ft. long)
- 6-8 folding mats (usually used to do sit-ups, gymnastics)
- 1 deck of cards
- 30 beanbags
- 10 topographical maps**
- 30 computers with online capabilities
- 30 map worksheets**
- 3 distance wheels
- 3 100’ tape measures
- 30 rulers
- 30 sets of colored pencils/crayons
- 3 overhead transparencies**
- 150 yards of crate paper cut in 10 yd. pieces
- 1 liter of washable paint
- 4 shallow pans (to put paint in)
- 30 pedometers
- 15 writable markers (any color)
- 36 index cards
- 6 jump ropes
- 6 small clip boards
- 6 hula hoops
- 3 basketballs
- 3 nerf balls
- 3 flying discs
- 3 softballs
- 3 volleyballs
- 3 soccer balls
- 15 tennis balls
- About 30 pieces of paper for almost all lessons
- 6 four person tents

- 15 plastic bags
- Cones for each student
- 6 large paper bags
- Task cards with courses on them for each group (given below)**
- 20 Ribbon set up at destination points with bearing written on them the bearings given below. These can be tied to stakes or stuck to the ground.
- Instruction cards for each student**
- 26 stakes labeled A-Z
- Compass courses developed the previous day**
- 30 Maps**
- 52 Stakes
- 30 Maps88
- 30 note cards
- 30 rolls of ribbon
- Students note cards for their compass courses.
- 1 Roll of string (or whatever you'd like to use to create maze walls)
- Scissors
- 50 stakes labeled appropriately
- Maps**
- 20-25 stakes
- 30 Maps**
- 1 whistle
- 30 tests**
- 30 maps for the test**
- Compass course set up with information at checkpoints for next checkpoint.
- 12 different colored rubber bands 30 of each color (or 6 and only have one per group not per student).

Orienteering Syllabus

Instructor(s): <Insert Name of instructor here>
Contact Info: <Insert E-mail address of instructor here>

Skills that will be learned in the Orienteering Unit

1. Importance of Orienteering
2. Environmental Factors
3. Compass Skills
4. Map Reading Skills
5. Topographical Knowledge
6. Communication and Teamwork Skills

Course Description

Orienteering is a skill you will take from this class that will be useful for a lifetime. The goal of this course is to teach basic orienteering skills. You will learn the proper method of using a compass effectively. Map reading will be taught so you have a firm grasp on how to use a map and a compass to learn to navigate. On some days there will be a short instruction or lecture before we begin. As the student, you will learn the basics on compass and map reading. Secondly, you will be given tasks to accomplish the skills learned in class. Teamwork and communication will be used to accomplish the tasks presented.

Grading

Participation and Attendance will be assessed and contribute to your grade in this class.

- Students are required to attend class each day. It is important to be in class, because each day will contain pertinent information to successfully learn the subject matter. Students who don't participate will lose points.
- Students who miss class with excused absences will be given the opportunity to make up class work missed.
- Participation and attendance are important because each class will build off the one before. If you miss class, you will fall behind on the skills we will be covering.

Assessments

You will be formally assessed on all the skills you have learned. There will be several assessments for your skills and knowledge during the unit. There will be many opportunities in class to practice the skills introduced to you.

- There will be daily assessment at the end of class on most days, based on what was covered in class that day. These assessments will be on either skill or knowledge.
- At the end of the unit, there will be one "in the field" test. It will be based on all of the skills learned in the unit. Students will work in partners and will be given a series of tasks to complete with a map and compass.
- There will also be an individual final at the end of the unit that will include questions through out the entire unit.
- A few take home homework assignments will be given through out the unit. One is a Map-quest in which you will be asked to look up different things on the internet and report back on them.

Grading Scale

- Participation/Attendance 30 points
- Assessments 50 points
  2 points per small assessment (15)
  20 points for final
- Web-quest 20 points

Total 100 points

Grading Percentages

- 100%-93% A
- 93%-90% A-
- 89%-83% B+
- 83%-80% B-
- 79%-73% C+
- 73%-70% C-
- 69%-63% D+
- 63%-60% D-
- 59%-below F

General Class Rules

- Be to class on time and be ready to go.
- Have a positive mental attitude.
- Respect each other.
- Respect the Teacher at ALL times.

Central Washington High School
Physical Education Program

Orienteering Unit Informational Letter

Dear Parent/Guardian:

The unit that your student will be participating in at this time is orienteering. The students will be introduced to the different aspects of orienteering. This letter will describes activities that your child will participate in throughout the orienteering unit in PE class. Grading criteria and a course description is also addressed in this letter.

Student learning outcomes:
As a result of instruction in this course students will be able to…

- Gain knowledge on the importance of orienteering.
- Obtain information on environmental factors.
- Obtain the skills necessary to use a compass.
- Read maps effectively.
- Students will gain communication and team work skills.
- Students will conglomerate learned skills to know how to properly orienteer.

Course Description
Orienteering is a skill that students will take from this class that will be useful for a lifetime. The goal of this course is to educate the students on basic orienteering skills. Students will learn the proper skills to use a compass effectively. Map reading will be taught to the students so that they will have a firm grasp on how to use a map and compass to navigate. The learning will first take place in a classroom setting. The students will learn the basics on compass and map reading first, and secondly, the students will be given tasks to accomplish that will use the skills they have learned. Students will learn to demonstrate teamwork and communication to accomplish the tasks presented to them.

Grading Criteria
Participation and Attendance
-Students are required to attend class each day. It is important to be in class because each day will contain pertinent information to successfully learn the subject matter. Students that don't participate will lose points.
-Students that miss class with excused absences will be given the opportunity to catch up on what they missed.
Assessments
-The students will be formally assessed on all the skills they have learned. There will be many opportunities to practice the skills introduced to them. The students will be informed prior to all assessments.
Tests
-At the end of the unit, there will be one "in the field" test and one written final. It will be based on all of the skills learned in the class. Students will work in groups and will be given a series of tasks to complete.

Parent/ Student Contract

We have read and understand the class expectations. We are aware of the responsibilities and rules for each student in the class.

Student signature_____

Parent signature_____

Please list any medical problems that I need to be aware of concerning your son/daughter:

_____
_____
_____
_____

Students will receive <5> participation points for returning this signed form by the 5th day of class.

References

Geary, D. (1995). *Using a Map & Compass*. Mechanicsburg: Stackpole Books.

Hammerman, D.R., Hammerman, W.M., & Hammerman, E.L. (1994).*Teaching in the Outdoors (4th Edition).* Danville: Interstate Publishers Inc.

McNeill, C., Cory-Wright, J., & Renfrew, T. (1998). *Teaching Orienteering (2nd Edition)*. Champaign: Library of Congress Cataloging-in-Publication Data.

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Lampard, H., (2003) *Orienteering lesson plans*. Retrieved Oct. 2005 from www.pelinks4u.org.

Hulquest, N. (2005) *Orienteering Power point and class.* Retrieved Oct. 2005.

Width, D. (2005) Taught a class on Orienteering. Oct. 2005.

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson # 30

Objectives (Specific, Behavioral, Assessable)

1. By the end of class, students will work through a compass course that the teacher has created. **(NASPE 2, 5 and 6 and EALR's 1.2, 2.3 and 3.3)**

Teacher Objectives:

Equipment: (for a class of 30 students)

- 30 compasses
- Compass course set up with information at checkpoints for next checkpoint.
- 12 different colored rubber bands 30 of each color (or 6 and only have one per group not per student).

Instant Activity: none

Set Induction: Today we will be taking the final test for the unit. I will split you up into groups of five so there will be 6 groups. I will send each group to a different checkpoint on the course I created. From that checkpoint you are to work together and complete the course. You will know you have completed the course when you have returned to the checkpoint you started at. At each checkpoint there will be an object for you to pick up that will prove you were at the checkpoint. Take only one because the other groups will need them too.

MAF/Instructional techniques	Extensions	Refinements	Applications
Split the class up into groups. Give each student a compass so that they can all get the bearings. Try to have the course be set up in a wooded area. See attachment an example course. The course will be more difficult than the courses they have completed prior to today. Inform them of this but remind them that they are working as a team so between the five of them they should be able to figure it out. To add to difficulty, try to avoid putting checkpoints in locations that have been used in the past. Also, make the checkpoints as least obvious as possible. There will be 12 checkpoints. This way you can send the groups out to every other checkpoint to avoid having the students see the other groups and make it easier. (So if a group starts at checkpoint 5, they should end at checkpoint 5) Have a different colored rubber band for everyone in the class at each check point to know they made it to each one.	This course should be challenging but not to hard for you to complete if you have been learning try to thin back to what I have taught you. You will all start at different check points so it will not be cluttered.	Every group member should be setting a bearing.	Once you make it back to the check point come back to me and show me your possessions.

Informing Task: When I say go, you may get started on the final course. There are twelve checkpoints that you must find. Good luck and I'll see you when you are finished. Go.

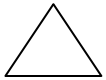
Closure/Assessment: As the groups come in go through their items that they should have picked up from each checkpoint. If they have all twelve rubber bands then you know that they completed the test. Congratulate them and they are done.

Example of course card:

1-2	90`
2-3	900`
3-4	260`
4-5	170`
5-6	110`
6-7	90`
7-8	90`
8-9	240`
9-10	0`
10-11	10`
11-12	70`
21-1	170`

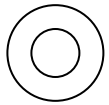
Key:

Tree: 

Start: 

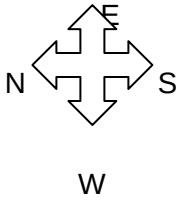
Pathway:

Lake: 

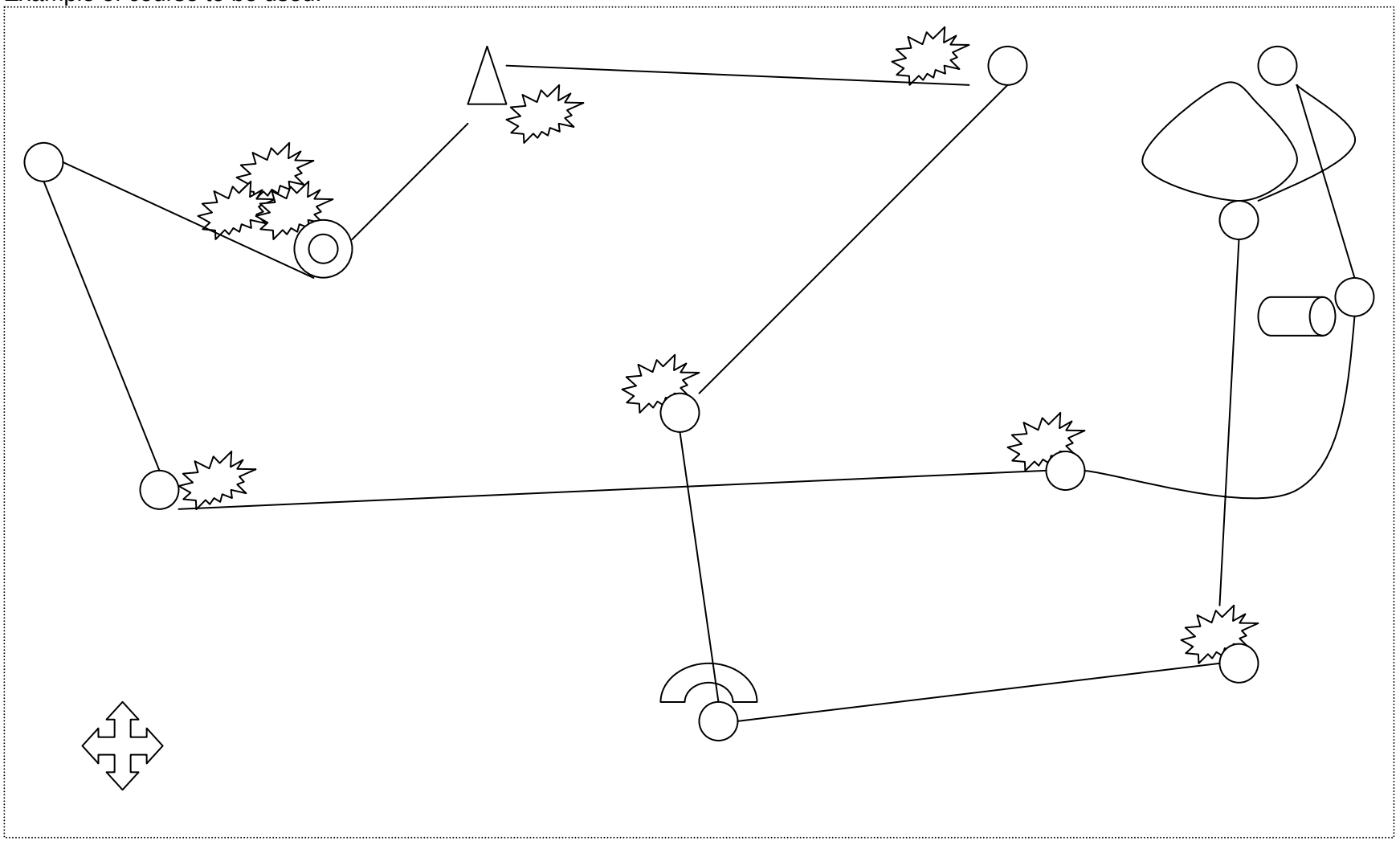
Finish: 

Bench: 

Checkpoint: 

Compass Rose: 

Example of course to be used.



Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson # 29

Objectives (Specific, Behavioral, Assessable)

1. By the end of class, students will take a written test. The test will be done individually. Students will be given a map that will contain the answers to the written test. **EALR 2.3 Standard 2**

Teacher Objectives:

Equipment: (for a class of 30 students)

- 30 tests
- 30 maps for the test

Instant Activity: None			
Set Induction: We are going to take a test over maps. Just try to remember all that we've done so far with maps and you will do just fine.			
MAF/Instructional techniques	**Extensions**	**Refinements**	**Applications**
Hand out a test and a map to each student. Make sure they are far enough from each other that they can't see the work of others.			
Informing Task: (the remainder of class may be used to finish the test) When I say begin you may start the test. Remember to keep your eyes on your own work. Begin.			
Walk around the students to let them know you are watching so they avoid cheating. If everyone is done early you can have an open gym and get some equipment out.			
Closure/Assessment: About 5 minutes before the end of class, have the students stop their test. Ask the students to bring their tests to you. Ask for any questions.			

Orienteering assessment 16
Assessment

Name: _____ Date:_____

Topographical Map Final
Map to be used can be found at: http://www.fs.fed.us/r6/wenatchee/cle-elum-orv/orv-maps.html

1. About how long is Kachess Lake (including Little Kachess Lake)? (in miles)

2. Using your Cardinal directions, where is Jolly Mt. Located on the map?

3. Name 9 lakes on the map.

4. Which direction does Gale Creek flow?

5. According to the map, how high is Thorp Mt.?

6. What direction is Mt. Baldy located in reference to Swan Lake?

7. From what the map shows, how many creeks flow into Cle Elum Lake on its eastern flank?

8. What lake does French Cabin Creek flow into?

9. How far is Margaret Lake from Jolly Mt.? (in miles)

10. What lake displays two sand bars on its shores?

Orienteering assessment 16
Assessment (Answer Sheet)

Name: _____ Date:_____

Topographical Map Final

1. About how long is Kachess Lake (including Little Kachess Lake)? (in miles)
    9-10.5 miles

2. Using your Cardinal directions, where is Jolly Mt. Located on the map?
    NW corner

3. Name 9 lakes on the map.
    1. Magaret Lake 2. Swan Lake 3. Tock Hobbit Lake 4. Bake Lake 5. Swamp Lake 6. Kachess Lake 7. Cle Elum Lake 8. Thorp Lake 9. Little Joe Lake

4. Which direction does Gale Creek flow?
    West to East

5. According to the map, how high is Thorp Mt.?
    1750 ft.

6. What direction is Mt. Baldy located in reference to Swan Lake?
    Northwest

7. From what the map shows, how many creeks flow into Cle Elum Lake on its eastern flank?
    Seven

8. What lake does French Cabin Creek flow into?
    Cle Elum Lake

9. How far is Margaret Lake from Jolly Mt.? (in miles)
    14-14.5 miles

10. What lake displays two sand bars on its shores?
    Cle Elum Lake

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson # 28

Objectives: (Specific, Behavioral, Assessable)

1. By the end of class, the students will be able to encourage students to work together in a team by completing the course. **(NASPE 2, 5 and 6 and EALR's 1.2, 2.3 and 3.3)**

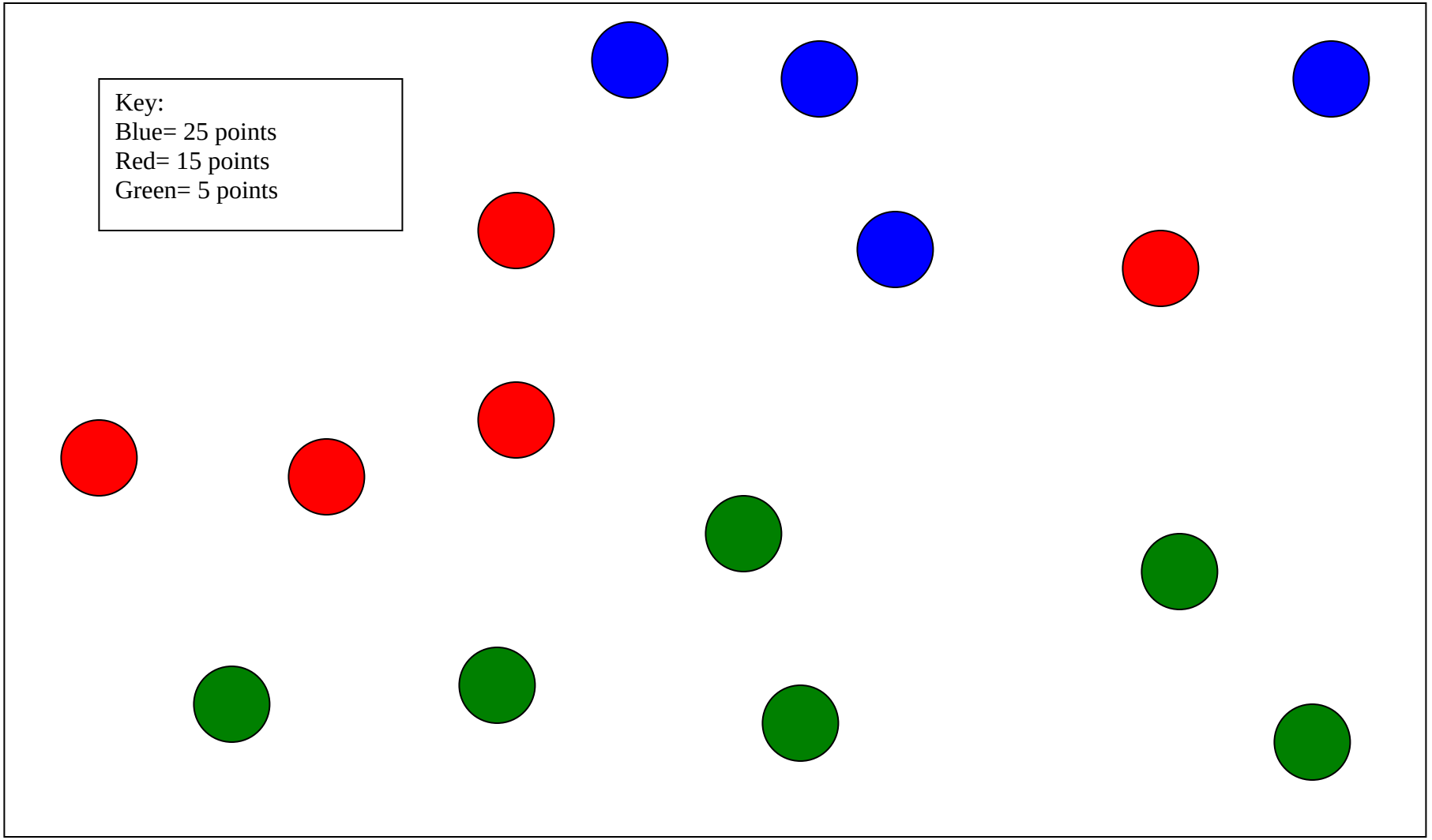
Teacher Objectives:

Equipment:

- 20-25 stakes
- 30 Maps
- 30 Pencils
- 1 Stopwatch
- 1 whistle

Instant Activity: None			
Set Induction: Today you are going to see how many points your team can get while racing against the clock. The object is to get as many points as possible but make it in before the time is up otherwise points will be deducted from you.			
M.A.F.	**Extensions**	**Refinements**	**Applications**
Teacher needs to set up course prior to class beginning. Make sure to put the point amounts next to each stake. The closer stakes need to have fewer points then the stakes further out. Have a piece of paper wrapped around the stake that is big enough for everyone to write their initials on when they go to that stake to prove they were there and that each team member made it. Try to have a field at least the size of a football field, it can even be over the entire school grounds. See the attachment for a course idea. If the field is small have the students report back to the teacher between each stake and record they were there that way. Try to make the stakes at different difficulty levels as far as where they are placed. Give the students a master copy of where the stakes are and explain that the stakes that are close are fewer points than the stakes farther out so they need to strategize which stakes they want to get as a group.	This course is set up for points. Here is a copy of the course. The stakes that are farther away will be worth more points than the ones closer in. Your team will have 30 minutes to get as many points as possible.		

Students will be in groups of 3 or 4. Allow them to work with who they want to.			
Informing Task: When I say go I would like you to get into groups of three or four with who ever you want and begin planning. I will give you 4 minutes of planning time and then blow a whistle to begin your 30 minutes. Remember that this is a timed competition. Know that the stakes that are closer will be fewer points; the ones farther away will be greater point value. I will blow a whistle and all teams should be in on time, late teams will be docked points. How long do you have? (30 min) How many to a group? (3 or 4) Are there any questions? Go.			
Give the students 4 minutes to plan out their strategies. Blow the whistle to begin the timed race. (start your stop watch to time the 30 minutes). Blow whistle at the end of the 30 minutes. All teams that are late are docked 5 points per minute late. Allow them to add up their points.	Everyone in the group must go to every stake.	Decide as a group which stakes you want to go to.	This is a timed competition. All teams need to be in with in the 40 minute time allotted. Any teams that are late will be docked 5 points per minute late.
Informing Task: Now that you have gotten all the points you could, lets add them up. When I say go I would like one member of the group to add up all the points and write that number down. Then pass it to another group member and have them check to make sure the math was done correctly. How many times will you add them up? (2) Will it be the same person each time? (No) Go.			
Closure/Assessment: Raise your hand and tell me what your groups' strategies were at the beginning. Did your team stick to this plan? Did it work? If you were to do this again would your strategy change? Why?			


Key:
Blue= 25 points
Red= 15 points
Green= 5 points

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson # 27

Objectives: (Specific, Behavioral, Assessable)

1. By the end of class, the students will be able to work through various courses in a time efficient manner by racing against their fellow classmates. **(NASPE 2, 5 and 6 and EALR's 1.2, 2.3 and 3.3)**
2. By the end of class, the students will be able to explain the difference between competitive orienteering and other types. **(NASPE 2, 5 and 6 and EALR's 1.2 and 3.3)**

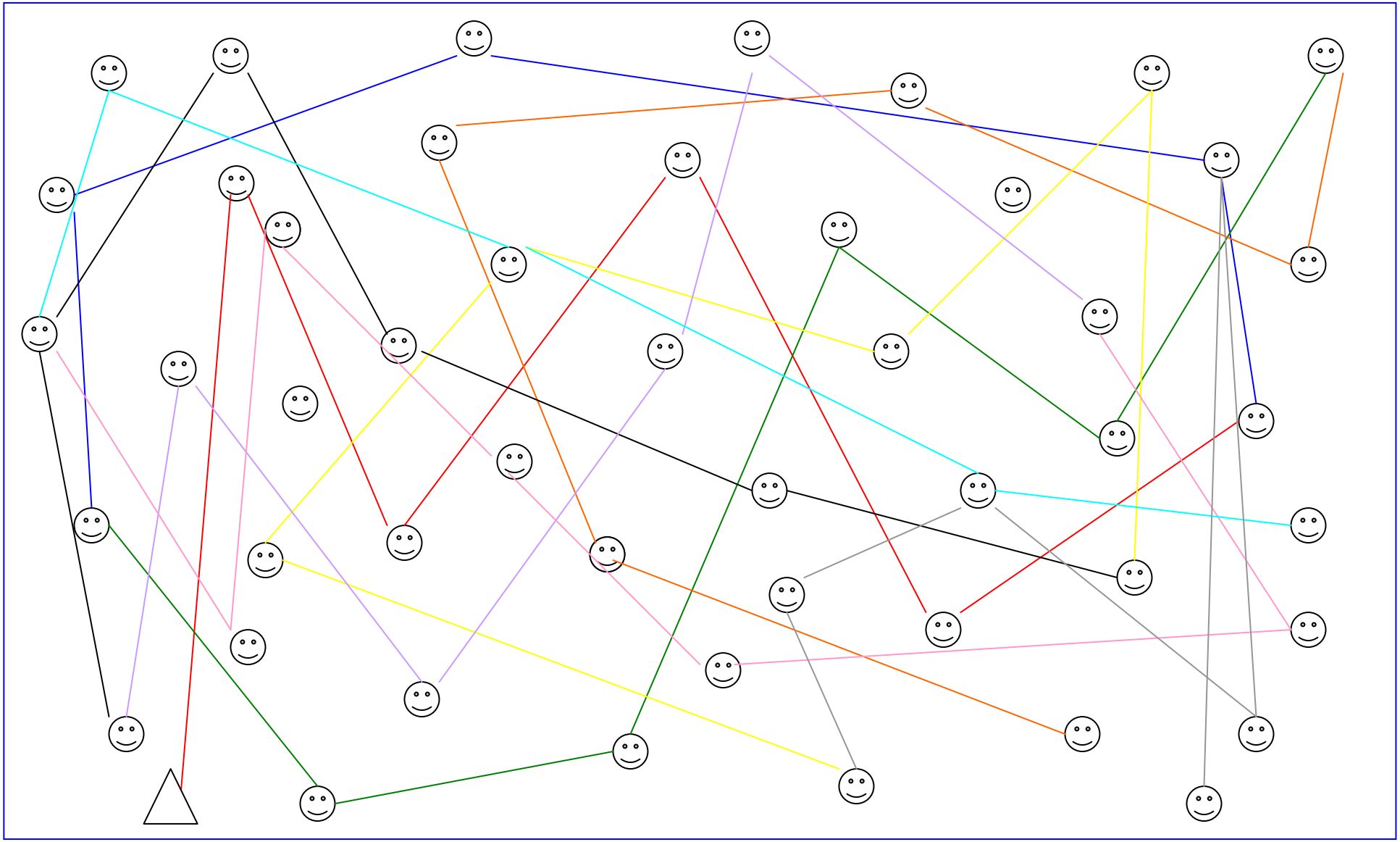
Teacher Objectives:

Equipment:

- 50 stakes
- Maps
- 15 watches or stop watches

Instant Activity: None			
Set Induction: You all better have your racing shoes on today! Because today we are going to have course races! This is called competitive orienteering.			
M.A.F.	**Extensions**	**Refinements**	**Applications**
Teacher needs to set up course prior to class beginning according to maps below. Be sure to use an area about the size of the football field. The students should have to travel a ways before getting to their next stake. See attachment for course ideas. When setting up the course, set the stakes up with letters on each one. If the students complete the course in the proper order they should spell out a five letter word. Color code the words in accordance to the map the word goes with. When they are finished with all 10 courses, there should be 10 five letter words. Pair students off. Give each pair a map. (maps will be handed out randomly-different color means different course to be followed) Tell students that at the end of the course there should be the final letter to their word. Even if they know what the word is they need to find the final stake. Give each pair of students a	For today's activities you are going to work with a partner to complete a number of courses. You will decide which course you want to do based on the map. Once you decide which color course you want to do you will begin going form stake to stake. You must go to them in order. They all have letters on them and all five letters should spell out a word. You must go to the closest one to each check point to spell the right word, so do not skip any, look for the closest. Once you complete that course work on another one. There are up to ten words spelled.	Competitive orienteering is different from score or point-to-point orienteering because you are racing against other teams for time, not points or checkpoints. The faster you complete the course, the more likely you are to win the competition.	Write down the times you complete each course and at the end we will add them up to see who was the fastest.

watch or stop watch. Tell them it is important to also write the time they got to the last stake while they getting their last letter.			
Informing Task: When I say go I would like you and your partner to start the race. Remember that you can start at what ever course you would like. You should time every course that you complete. These times will be added together at the end to get your total time you spent. When you are finished with all 10 courses you should have 10 five letter words written down. Do you have any questions? Go.			
Students will be scattered through out the course. They should be working with their partner on the same thing (in other words they must stay together) one partner shouldn't be working on a different course. Allow the students as much time as needed. But call them in at the end if they are not finished.	Try to complete all the courses that you can in the time allotted.	Be sure you are working with your partner.	Remember this is a race. You want to complete all courses as quickly as possible.
Closure/Assessment: Raise your hand and tell me what kind of orienteering we worked on today? What is the difference between this type and others we have learned?			



Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson # 26

Objectives: (Specific, Behavioral, Assessable)

1. By the end of class, the students will appreciate setting a map with a compass by directing themselves out of a maze. **(NASPE 2, 5 and 6 and EALR's 1.2, 2.3 and 3.3)**

Teacher Objectives:

Equipment: (for a class of 30)

- 1 Roll of string (or whatever you'd like to use to create maze walls)
- Scissors
- 30 compasses
- 15 blindfolds
- Pencils/ Paper

<table>
<tr><td colspan="4">Instant Activity: Blindfold Tag. Divide the class into partners. Identify boundaries (start small, work your way to a bigger area if difficulty is needed). Explain that this is a silent game, if someone talks, they are automatically “it”. One partner will need to put the blindfold on. The other partner will be the director. One pair will need to be “it” first. All other pairs will begin walking within the boundaries. The director of the pair that is “it” needs to stand behind the blindfolded partner and direct them so they are able to tag another pair. In order to direct their partners, they need to lightly tap on the left or right shoulder (or middle of back to go straight).</td></tr>
<tr><td colspan="4">Set Induction: Have any of you ever walked through a corn maze? Have any of you gotten lost in a corn maze? Well it’s easy to get lost in a maze UNLESS you have your handy compass with you to guide you out.</td></tr>
<tr><td>M.A.F.</td><td>Extensions</td><td>Refinements</td><td>Applications</td></tr>
<tr><td>Teacher needs to set up course according to drawings below before class begins. See attachment for maze ideas.

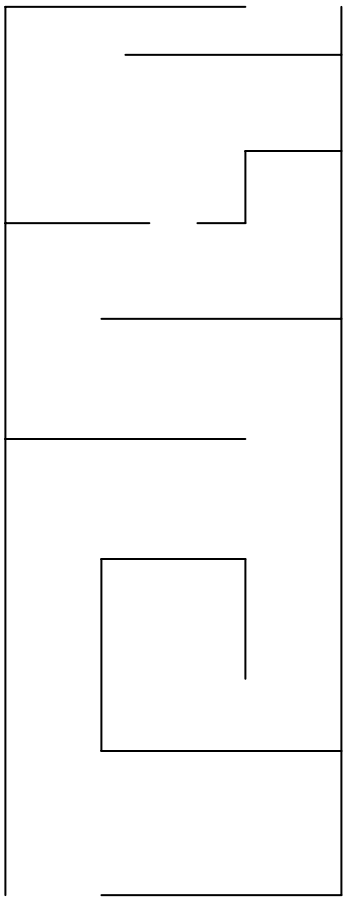
Allow students to look at the maze drawings before they start the course so they get a feel for what they need to do. Make sure that you allow them just enough time to glance at the drawing though- not study it!

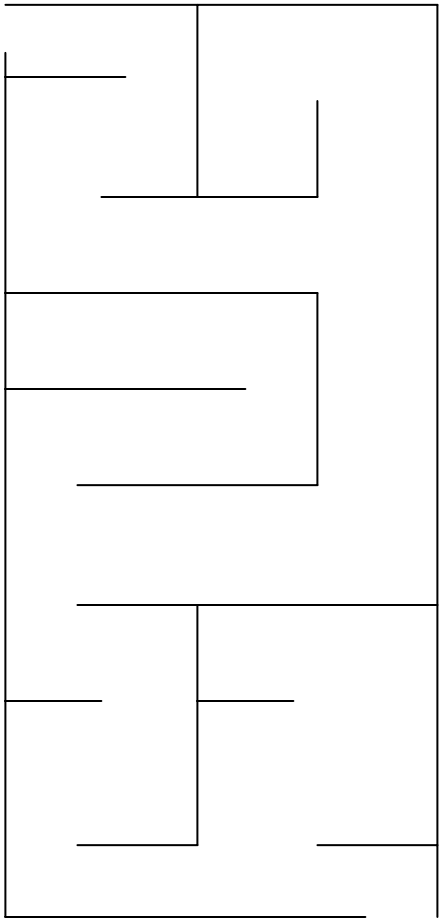
Split the class up as evenly as possible between six groups. Each group will start at different ends of the mazes. (group 1 at one end of maze and group 2 at other end of the same maze) etc.</td><td>Once in the maze, you will not need to reset your compass (making sure to pay attention to the magnetic north needle) every time you turn a corner because the end point will stay at the same direction. If you do you will be the ones who turn around.</td><td></td><td></td></tr>
<tr><td colspan="4">Informing Task: When I say go, I would like for you to go to the start of the maze I have already assigned to you and try to work as a team to get through the maze together. Remember to listen to each others ideas and not to leave anyone behind. Go.</td></tr>
<tr><td>Make sure students are working together.

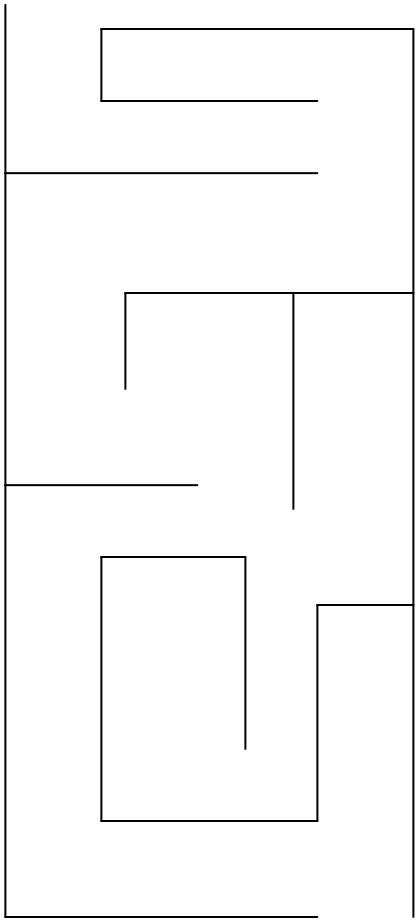
Try to mediate any fighting.

Keep encouraging the students to not reset the bearings as they turn each corner, so it is the compass that gets them out of the maze… not just luck of the draw.</td><td>By keeping the direction of travel in mind it will keep you going the right basic direction even thought there may be obstacles in the way.</td><td></td><td>The more quickly you get through the maze the more mazes you will get to try.</td></tr>
</table>

After groups finish, have them meet in a common area. Send the groups to a different maze then the one they just completed.			
Closure/ Assessment: Have students write down why it is important to always know where north is and the importance of knowing where north was throughout this activity.			







Orienteering assessment 15
Assessment

Name_____ Date_____

Now that you have completed the mazes, write a brief paragraph describing why it is important to always know where north is and the importance of knowing where north was throughout this activity.

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson # 25

Objectives: (Specific, Behavioral, Assessable)

1. By the end f class students will complete as many of their peers compass courses as possible. **(NASPE 2, 3, 5 and 6 and EALR's 1.2, 2.3 and 3.3)**

Teacher Objectives:

Equipment: (for a class of 30 students)

- 30 compasses
- Students note cards for their compass courses.
- 30 digi-walkers

Instant Activity: None			
Set Induction: Today we get to be explorers of our school. We are going to complete as many of our peers compass courses as possible.			
MAF/Instructional techniques	**Extensions**	**Refinements**	**Applications**
The teacher should have the students run through their own course once more to make sure that their ribbons are still in place. If they aren't then they should put up a new ribbon with coordinates for the next checkpoint on it. These should be the courses from lesson 24.	We are going to start by running through our own courses just one more time to make sure they are ready for others to do.	Every check point should be written down with paces, bearings and a physical description.	
Informing Task: When I say go, I would like each of you to go through your own course once to make sure that your ribbons and coordinates are still there. Once you have finished come back to me with a note card that has your starting point written down on it. Go			
Encourage the students to be back within ten minutes. It shouldn't take them long to run through their course again.	Try to run through these quickly so that we can exchange them with another student.		
When students get back then go ahead and have them trade courses with each other.	Now trade with another student in the class.		
Informing Task: When I say go, I would like for you to take somebody's course starting point card and start their course. Once you finish a course then come back to me and we will get you started on another course. Go.			
If a student gets stuck on a course then go and help them. You should have the students note cards that has the specifics of each checkpoint on them. Use this to help the students if necessary.	Try to successfully get to all the checkpoints. The last one should have no bearing written on it. Come and see me when you get to that bearing.		The faster you get through each course the more courses you will get through.
Informing Task: Blow the whistle. Nice work students. I hope you enjoyed going through each others courses. When I say go, you need to go out and clean up the checkpoints on your own course. When you get done come back to me. "Go"			
Closure/Assessment Group discussion: Have students share which course they liked and what they liked about the course. Also, have the students' share what confusions they had (if any) and how those confusions could be straightened out.			

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #24

Objectives (Specific, Behavioral, Assessable)

1. By the end of the class all students will have created their own compass course. **(NASPE 2, EALR 2.3)**

Teacher Objectives:

Equipment: (for a class of 30 students)

- 30 compasses
- 30 note cards
- 30 rolls of ribbon
- 30 digi-walkers

Instant Activity: None.			
Set Induction: Have you ever wondered how the compass courses are made? What do you think it takes to make a course? Well today you will be creating your own compass course around the school grounds.			
MAF/Instructional techniques	**Extensions**	**Refinements**	**Applications**
Hand out a compass, roll of ribbon, and one or two note card to each student. At each check point the students should write down the specifics of the checkpoint. This will include the bearing to follow, the characteristics of the checkpoint (tree, building, bike rack etc.), the pace number it took them to get there and anything else that the students feel is important to include.	You are going to use the compass to get a bearing and the ribbon will mark the check point. Once you set the bearing, travel and decide where to put your check point, you should write the next bearing on that ribbon, so the student who will do it next knows each of the bearings.	Be sure you write down your first bearing and pace number down on a piece of paper, and the rest should be on the ribbons.	
Informing Task: When I say go, I would like for you to start creating a compass course. I want you to do this alone so that you have your own work. You should get as many checkpoints as possible in forty minutes. At that time you will hear a whistle. When you hear the whistle I want you to use the remaining fifteen minutes of class to go back through your course and make sure it is done how you wish. Go			
Make sure that students are working alone. If any of the students are having a hard time getting started then feel free to help them get going.	Be sure when you go back through your course that you have all things recorded. Bearing, pace number and characteristics of that check point.		
Informing Task: Blow the whistle. When I say go, I would like for you to start going through your course to see if it has been done effectively. Try to do this quickly because you only have fifteen minutes. You should be able to go through it quickly because you know the course. In fifteen minutes I will blow the whistle again and you should come and turn your course into me. Go.			
Closure: Students will present their finished product to the teacher when class is finished. The students will turn in their note cards. The note cards will contain all of the details needed to complete their course.			

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #23

Objectives: (Specific, Behavioral, Assessable)

1. By the end of class, students will understand the difference between point to point orienteering and score orienteering by being able to demonstrate each type. (**NASPE 2 and 6**, **EALR's 1.2, 2.3 and 3.3)**

Teacher Objectives:

Equipment: (for a class of 30)

- 52 Stakes
- 30 Maps
- Pencils and paper
- 1 Stopwatch
- 30 digi- walkers

Instant Activity: None			
Set Induction: How many of you enjoy getting a lot of points? With score orienteering, you get points based off the stake you go to. This kind of orienteering is different in that you do not go to a set course, you go to any stake you want based of the map. The more stakes you go to the more points you will get.			
MAF	**Extensions**	**Refinements**	**Applications**
Teacher need to set up course prior to class beginning. See the attachment for the course. Stakes should be lettered a-z and A-Z. (lower case and upper case can be used if wanted) Each stake will be a different amount of points. (a=1, b=2, c=3, z=26, etc) Make sure stakes are set far apart. If able to use entire size of football field (or bigger) DO! Students will go to each stake, write down the letter and point value of each stake. Have a piece of paper wrapped around the stake where the students can initial to make sure they went to each stake they say they did.	Remember that score orienteering is different than point to point because you can go to any stake and there is no order. Remember when you get to the stake to write down the letter and the point value. At the end we will add up all your points.		You cannot go to the same stake twice.
Pass out the following map and explain how you set up the point scale, so the students know where the stakes with the highest point values are so they can plan their routes accordingly.	Here is the map of the stakes. Next to each stake is the point value to look ahead of time at which stakes you want to go to and then try to find them.	Remember that you can not go to the stake twice. And you have to initial the stake once you get there.	
Informing Task: When I say go, I would like for you to go to as many stakes as possible. You will need to write down the letter of the stake,			

the word on the stake and the point value of the stake. Make sure that you only visit each stake once. Any questions? Go.			
Allow students 20-30 minutes to perform the task. Students will be scattered throughout the football field.			
Informing Task: Call students to group space. When I say go, I would like for you to total the amount of points you got today. Go.			
Go around to students help students calculate if needed. Students will be in group space adding up their points.	Add up all the points you got today.	Only add each one once.	
Closure/ Assessment: Ask students the following questions and have them raise their hands in accordance. 1. How many of you got 100 points? 2. How many of you got 150 points? 3. How many of you got 200? 4. More than 200? 5. What do you think allowed you to get so many points? 6. How could you get even more points?			
There is an attached map that can be used as an example of how to set up the field and the type of map that should be passed out for the students to help plan their route.			

A=1 T=20 X=24 H=8

M=13

E=5 S=19

Y=25

G=7

L=12 C=3

Z=26 I=9

N=14

R=18 P=16 J=10

B=2

O=15 K=11 Q=17

D=4

W=23

U=21

V=22 F=6

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #22

Objectives (Specific, Behavioral, Assessable)

1. By the end of the class the students will be able to coordinate their compass with their route on a map, and use the map scale to establish distances. **(NASPE 2, 5 and 6, EALR's 1.2, 2.3 and 3.3)**

Teacher Objectives:

Equipment: (for a class of 30 students)

- 6 compasses (one for each group)
- 30 Maps
- 6 watches
- 9 pieces of paper
- 30 digi-walkers
- 30 full sheets of paper
- 30 pencils

Instant Activity: Man the Master Maps. Teacher should go through the protocol. Go north, south, east or west when I say to go those directions. “Man the master maps” means get on hands and knees pushing your bottoms into the air. “Lost, don’t panic” means you find the person nearest to you and hug them. “Relocation” means you turn 360 degrees with your hand on your forehead like you’re looking for a new place to go. “Trip over a log” means you resemble a football tackle but with no opponent. “Stuck in a bog” means you lie on your side with one arm and one leg in the air. When I say “sprint to the finish,” everyone races to the center circle of the gym. Teacher should allow time to practice each movement. Be sure that North is clearly identifiable in the gym. Teacher calls out the commands. Teacher can introduce two or more commands to establish reactions.

Set Induction: Can any of you give me an example of how you could use a compass and map together at the same time? Do you think Columbus used a map and compass crossing over to the “new world”? How did that impact his travel? Today you are going to learn the importance of using your map and compass in unison. This is important when you can not see your next check point.

MAF/Instructional techniques	Extensions	Refinements	Applications
Teacher sets up course prior to class beginning. Check points should be set up to where you can not see another check point while standing at the current check point. There should be pieces of paper at each check point for the students to sign. Students should be in groups of five based on height. (Do this before the instant activity even starts so one group can leave the game at a time.) Give each group a map and compass. Go over symbols of the map. (Triangle=start, double circle= finish, regular circle=check point.) Explain to students that they will need to write their initials on the paper at each check point. Be sure that students are taking	We are going to start the instant activity, then I am going to excuse one group at a time to begin the course. Once you are finished with the course come back at finish the period wit the instant activity again. You will be going through the course as a group. Today is going to be different because you will not be able to see the next check point so you will have to depend on your bearings. The maps will help so you know you are going in generally the right direction. You will start at the triangle and finnish at the double circle. The regular symbols represent different check points. You should reach each one on the map so you may cross them off as you go along if you would like. Take turns with the map and compass.		

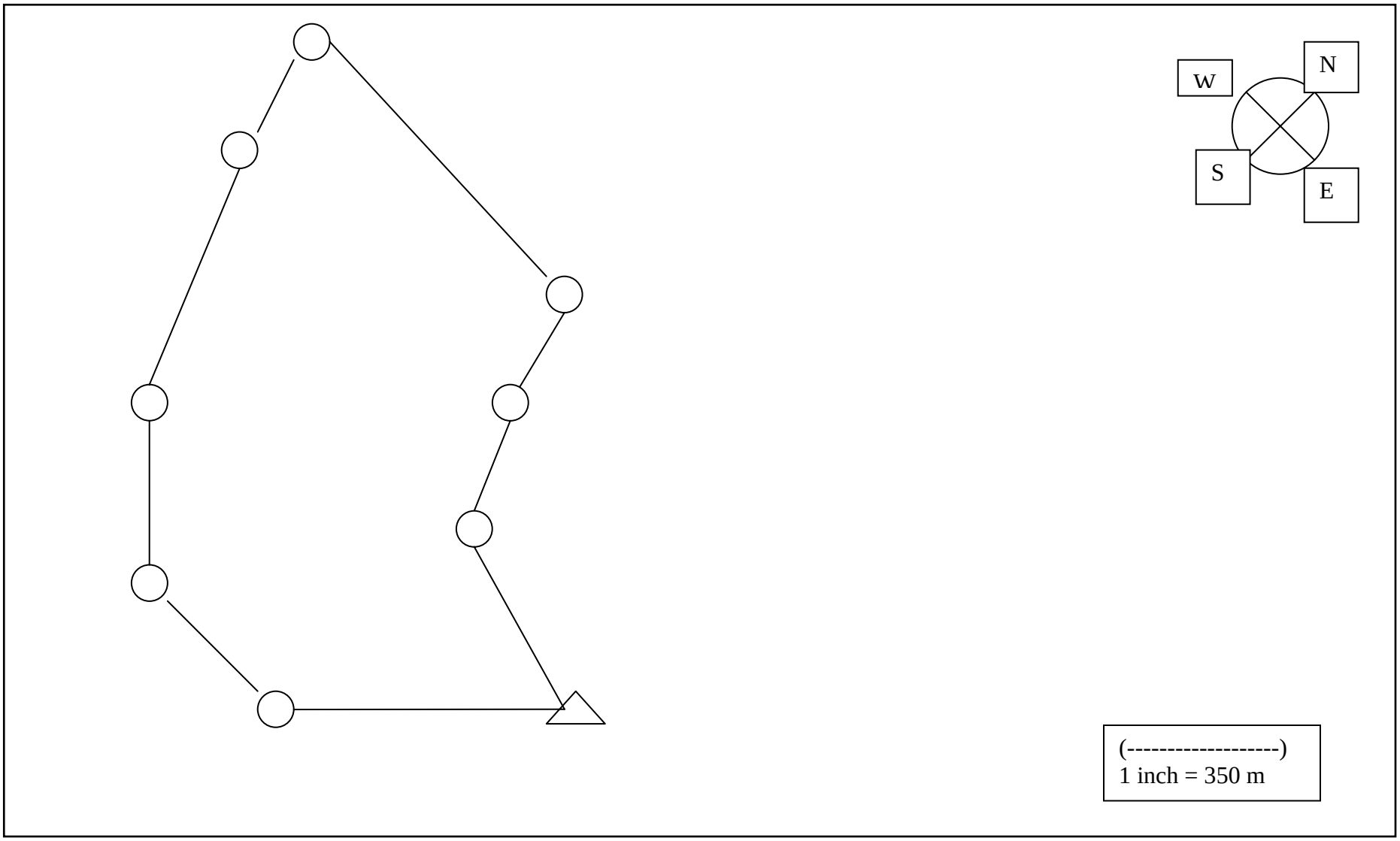
turns with the compass and map. At each check point they should switch. Each group starts once the group in front of them gets to the first check point. For the groups that start later, they will continue with the instant activity. Once students are done with their course, they should come back to the center circle of the gym and begin the instant activity. This time the instant activity will be student lead.			
Informing Task: When I say go, I would like for group one to being their map and compass course. The rest of the class will continue the instant activity with me until I tell your group to begin the course. Go.			
Continue leading the rest of the class through the commands of the instant activity. Prompt the next group to begin once you think the previous group has got to check point one. Once all groups have begun the course, walk around between check points and the gym to make sure students are following directions safely.	When group one is out of sight or at check point number two or three group number two can begin.	Use the map to keep you traveling in the right direction.	
If done correctly, the students will be able to navigate themselves through the course.		Set your bearings and keep them there in case an obstacle is in the way and you have to travel around it then back in the direction of the bearing.	
Closure/Assessment Students will be graded on their ability to sign in at each check point in sequential order.			

They will then be asked to discuss what they liked or did not like about the course that was set up. If they have dislikes, have them suggest how to make the course better.

EXAMPLE Course Card:

Start Building

1-2	Spring	294`	650m
2-3	Back Stop	42`	350m
3-4	Outhouse	4`	300m
4-5	Fir tree	267`	625m
5-6	Track	212`	230m
6-7	Tennis Court	178`	600m
7-8	Water Tower	124`	350m
8-9	Portable 10	90`	350m


W
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(----------)
1 inch = 350 m

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #21

Objectives: (Specific, Behavioral, Assessable)

1. By the end of the class the students will be able to successfully complete the course given to them by their fellow student. **(NASPE 2, 5 and 6, EALR's 1.1, 2.3 and 3.3)**
2. By the end of class the students will be able to appreciate the precise bearing it takes to create a compass course by grading each other's compass courses. **(NASPE 2, 5 and 6, EALR's 1.2, 2.3 and 3.3)**

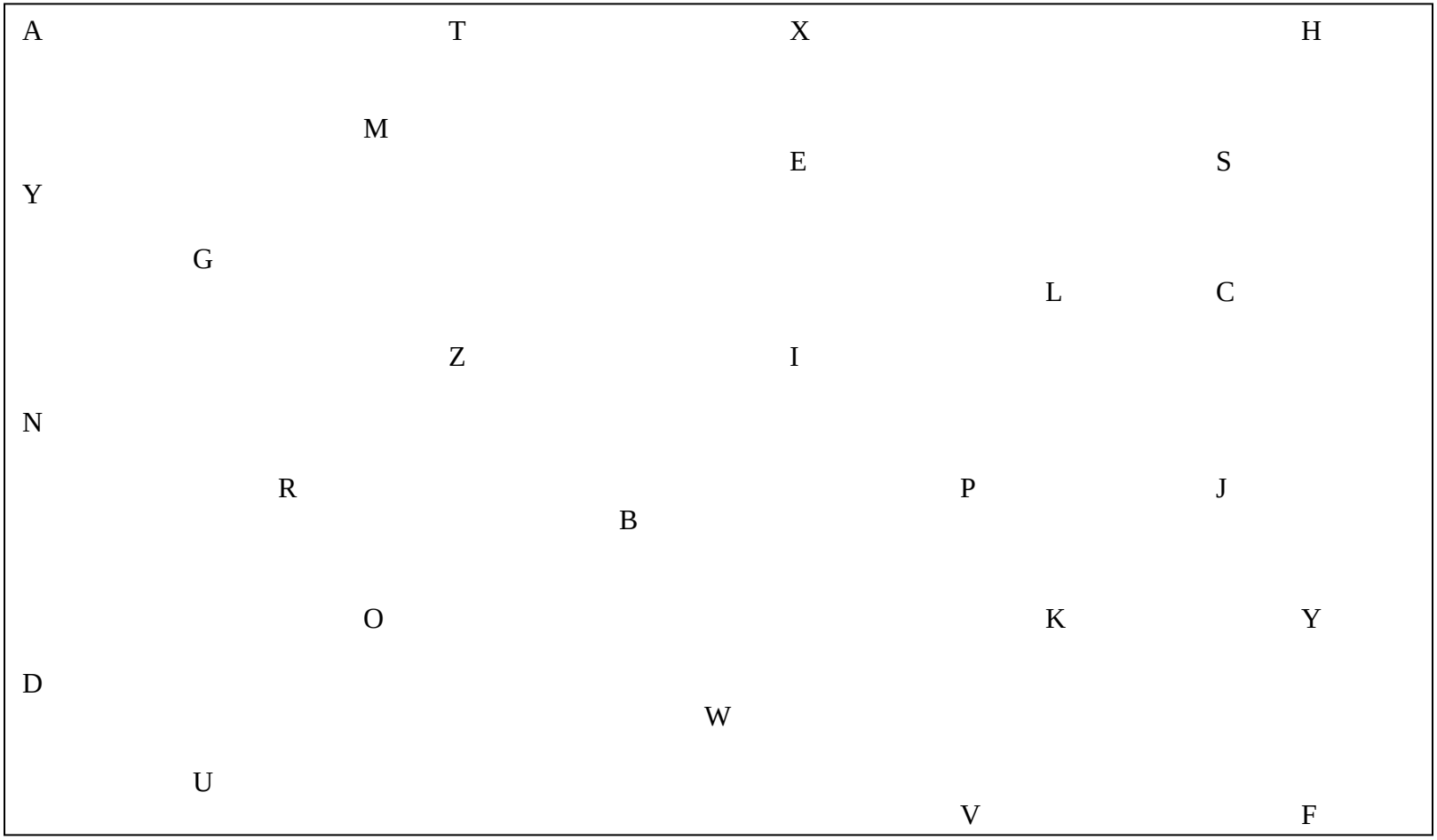
Teacher Objectives:

Equipment: (for a class of 30 students)

- 30 compasses
- 26 stakes labeled A-Z
- Compass courses developed the previous day
- Paper and Pencils
- 30 digi-walkers

Instant Activity: None			
Set Induction: Now it is time to test your course compass creating ability. Who thinks the course you made yesterday could be accurately followed today? Well, everyone should be raising your hands because today we are going to do just that.			
MAF/Instructional techniques	**Extensions**	**Refinements**	**Applications**
Teacher should set up course prior to beginning of class. The course needs to be set up exactly as it was from lesson 20. See attachment. Teacher hands out courses made from lesson 20 to random students.			
Informing Task: When I say go, I would like for you to begin the course compass you were given. If there are any mistakes you feel should be changed, write them in a different color pen. Go.			
Give students enough time to work through their courses given to them. Make sure students are staying on task and actually following the bearings and paces given to them, not just hunting for the correct lettered stake. (VERY IMPORTANT… make the letters small on the stakes so that the students can only see them when they are CLOSE to the stake.)	You should be going from point to point according to the course you were given.	Be sure you are counting the passes and following the correct bearing and ending up at the right spot.	
If done correctly, the students will be able to navigate themselves through the course. Stop the students 10 minutes before class is out. Call them together so they can discuss common errors. Pass out assessment rubric to each student for them to grade each other.	Be sure you are recording because we will be grading each other based on pass accuracy and bearing accuracy at the end of the lesson.		
Closure/Assessment • Students grade each other according to the course they just completed. Students should be graded on bearing accuracy, pace accuracy (within 10 steps) and letter of stake in reference to bearing given. To help students grade fairly, pass out the attached rubric.			

Each letter represents a stake. This is an example of how the teacher should set up the course prior to class beginning.



Assessment 14

Rubric

Pace and Bearing Accuracy

Name of assessor: _____ Name of student being assessed: _____

	5	3	1
Bearing Accuracy	All 15 bearings were written clearly and had a number and stake letter with them.	Only some of the bearings were there, only some were numbered and had a stake letter.	Very few bearings were written down, not many numbers or stake letters.
	Nearly all the bearings were accurate and usable.	At least half the bearings were accurate and readable.	Very few bearings were accurate.
Pace Accuracy	All 15 paces were written with the bearings.	Only about half the bearings had a pace written with it.	Very few of the bearings had paces to go with them.
	Nearly all the paces were with in two of my paces.	Only about half the paces were with in two of my paces.	Very few of the paces were with in two of my paces.

TOTAL: _____

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #20

Objectives: (Specific, Behavioral, Assessable)

1. By the end of the class the students will be precise in setting a bearing and following it individually. **(NASPE 2, EALR 2.3)**

Teacher Objectives:

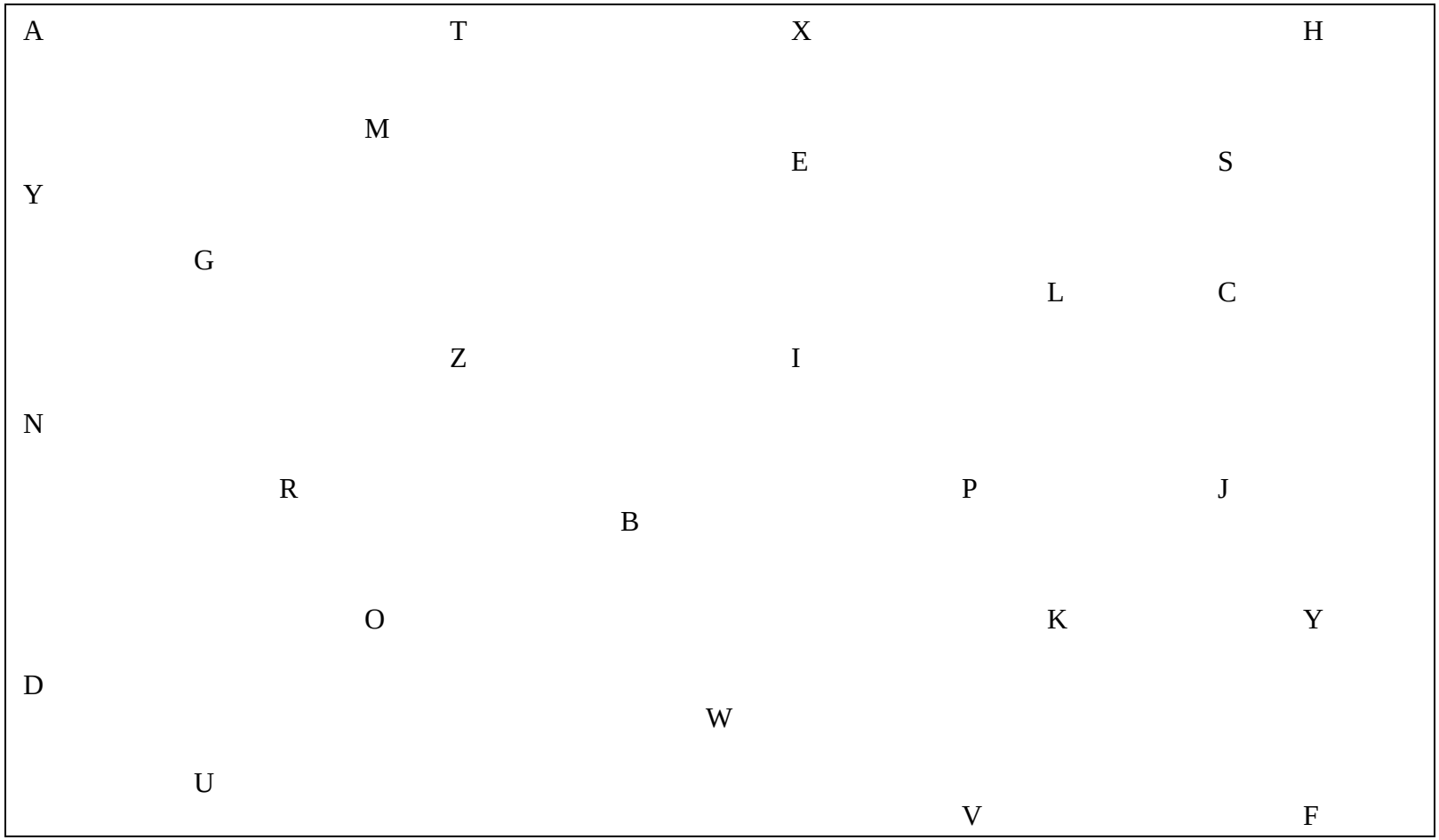
Equipment: (for a class of 30 students)

- 30 compasses
- Instruction cards for each student
- 26 stakes labeled A-Z
- 30 pieces of paper
- 30 digi-walkers

Instant Activity: None			
Set Induction: Did you all have fun on yesterdays courses? Why? What could make them better? Well today I am giving you all the chance to work on our own to create a course of your own.			
MAF/Instructional techniques	**Extensions**	**Refinements**	**Applications**
Teacher needs to set up course prior to class beginning. An example of the course is attached. Letter off the students A-Z (four letters will have 2 students at them) (Each student will start at a different point so that everyone will be doing the activity at one time and not following other students) Stress to students that today is an individual day, they are not to work in groups.			
Informing Task: When I say go, find the lettered stake that I assigned you to and stand next to it. Once you are at your first stake be looking toward the next stake that you would like to travel to. You will then shoot your bearing at your desired stake, any stake you wish, and count your paces to that stake. Once to the second stake, write down the bearing and amount of paces it took to get there. Please number each stake you go to as well as record the letter of that stake. I want you all to get at least 15 bearings, so you should have 16 stakes (Including the one you start at). So what do I want written on your paper at the end? A number, the letter of the stake, the bearing it took to get there as well as your paces and don't forget to put your name on it. Are there any questions? Go.			
Each student will create a course. The course consists of stakes that the teacher set out prior to class. Each student will start at their own letter. The teacher should walk around and monitoring to make sure that the students are on task and working on their course.	Remember you all will need to go to 16 stakes, so each of you should have 15 bearings and pace amounts written on your papers total.	Be sure you are working on our own work. This is a course you are making up.	
If done correctly, students should be shooting the bearing then walking to the stake. At the stake they will mark which stake they are at, the bearing it took to get there and how many paces it took			

them to get there. At the end of the class, students should have made a compass course. They should be able to give this course to another student, and that students should be able to follow the course and get to the same desired stakes.			
Closure/Assessment Students will be graded on their ability to create a course by turning in their course sheet developed during class.			

Each letter represents a stake. This is an example of how the teacher should set up the course prior to class beginning.



Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #19

Objectives (Specific, Behavioral, Assessable)

1. By the end of the class the students will be proficient at setting bearings and following them from completion of the compass course given by the teacher. **(NASPE 2, EALR 2.3)**

Teacher Objectives:

Equipment: (for a class of 30 students)

- 30 compasses, one for each student
- Task cards with courses on them for each group (given below)
- 20 Ribbon set up at destination points with bearing written on them the bearings given below. These can be tied to stakes or stuck to the ground.

Instant Activity: None			
Set Induction: How many of you have ever gotten directions and used a compass to get to your destination point? Did it work? How long did it take you? Well, **t**oday is going to be a very exciting class. After taking all that time to learn about compasses, we are going to put our knowledge to use and see how far we can get on a compass course.			
MAF/Instructional techniques	**Extensions**	**Refinements**	**Applications**
Prior to class set up ribbons at each check point along each course. There is sample courses at the bottom of the lesson, as well as a birds eye view of what it would look like.			
Informing Task: When I say go, I would like for you find three other people I the class with the same first letters of their name. If you have problems come see me. Go.			
Give the students a card that has the starting bearing on it.	Today we are going to work on setting bearings that are given and finding the destination point. I will give your group a set of bearings. You will then work together to find each point and end where you are suppose to.	It is important to have each person in the group setting each bearing. Agree on the direction of the destination point by comparing your compasses, the travel in that direction.	
Informing Task: When I say go, I would like for you to go to the starting point that you and group were assigned and start the task. Are there any questions? Go.			
Each group will try to complete the course. The course consists of ribbons that the teacher set out prior to class. The teacher should walk around and make sure that the students are on task and working on the course.	Your group should find four different destination points, at each point there will be a new bearing to set. Once your group is finished come see me.		If you come across an obstacle in the way, keep your bearing set and move around the obstacle and then back in the direction of the bearing.
If done correctly, the students will shoot a bearing from their starting point. They will walk the bearing until they come to a ribbon. On each ribbon will be a new bearing to follow. If the students follow it correctly then they will	The faster you do the course, the more courses your group will get through.	It is not a race, you are graded based your completion of the course.	

finish at the end of each course. If students complete their course early give them another course number to work on.			
Closure/Assessment • Completion of the course and effort is all that will be assessed.			

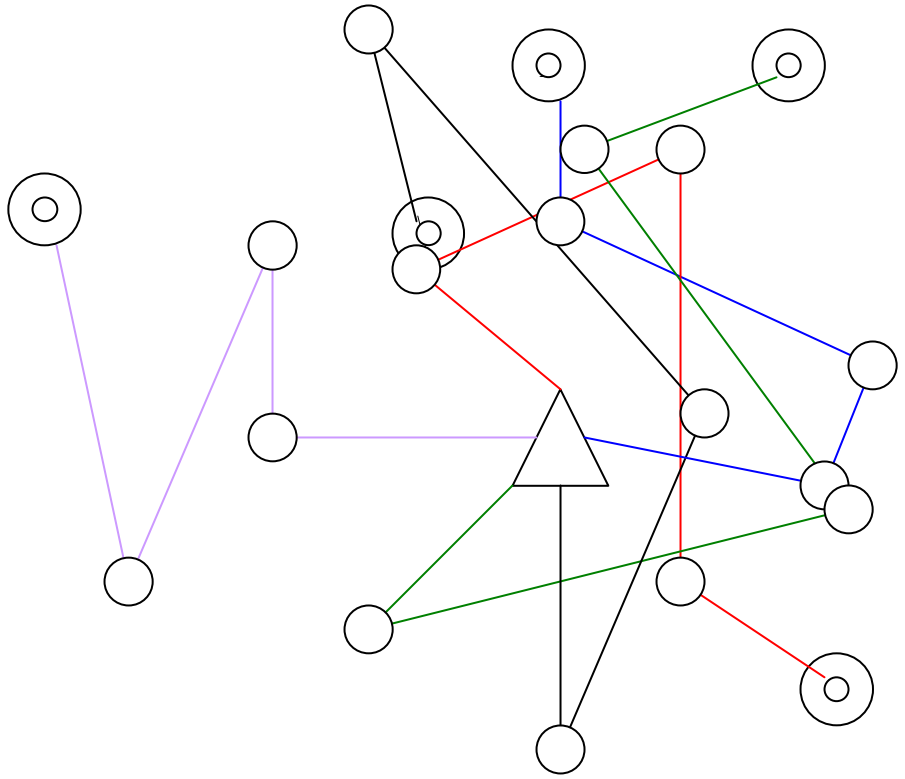
Course/ Group 1(Blue Ribbon): Starting bearing: 90 degrees (walk until you see the next ribbon)
Next Ribbon should say: 28 degrees
Next Ribbon should say: 320 degrees
Next Ribbon should say: 0 degrees

Course/ Group 2 (Red Ribbon): Starting Bearing: 300 degrees (walk until you see the next ribbon)
Next Ribbon should say: 40 degrees
Next Ribbon should say: 180 degrees
Next Ribbon should say: 115 degrees

Course/ Group 3 (Green Ribbon): Starting Bearing: 230 degrees (walk until you see the next ribbon)
Next Ribbon should say: 60 degrees
Next Ribbon should say: 340 degrees
Next Ribbon should say: 10 degrees

Course/ Group 4 (Purple Ribbon): Starting Bearing: 270 degrees (walk until you see the next ribbon)
Next Ribbon should say: 0 degrees
Next Ribbon should say: 200 degrees
Next Ribbon should say: 300 degrees

Course/ Group 5 (Black Ribbon): Starting Bearing: 180 degrees (walk until you see the next ribbon)
Next Ribbon should say: 50 degrees
Next Ribbon should say: 310 degrees
Next Ribbon should say: 140 degrees.



The Triangle is the starting point for all groups. This diagram is not drawn to scale. This diagram is just to give you an example of how the courses should be mapped out. Blue is group 1, Red is group 2, Green is group 3, Purple is group 4, and Black is group 5.

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #18

Objectives: (Specific, Behavioral, Assessable)

1. By the end of class, the students will be able to take bearings with a compass and follow them with accuracy to a chosen location by getting to their original start points using a back azimuth. **(NASPE 2 and 3, EARL 2.2)**

Teacher Objectives:

Equipment: (for a class of 30 students)

- Compasses for the students
- Cones for each student
- 6 large paper bags
- 30 ½ pieces of paper
- 30 pencils

Instant Activity: "Freeze tag". One person will be "it". The rest of the class must stay in the designated area. Once tagged by the tagger the students freeze with their legs shoulder width apart. The only way for them to get un-frozen is for another partner to crawl between their legs. Variations: Add more taggers. Make the general area smaller or bigger.			
Set Induction: Have any of you wondered how a pilot can navigate at night? Well, he uses his instruments. He can't see the ground so he must rely on his tools to navigate. We are going to do something similar using a compass and a paper bag.			
MAF/Instructional techniques	**Extensions**	**Refinements**	**Applications**
Hand out compasses. Review with the class how to take a bearing. See previous lesson. (Lesson 17) Give students two landmarks to practice measuring their bearings as learned before.	Example: I want you to shoot a bearing at that tree and tell me what you get.		
Informing Task: When I say go, I would like for you to get a partner, a cone, a paper bag and line up on the sidelines of the football field. Wait there for further instructions. Go.			
Cones and paper bags should be spread out on the field for students to grab easily. Have the students set their compass to the same bearing. Once they do this, have the students walk 50 feet using their bearing.			
Explain to the students how to shoot a back azimuth. (going in the opposite direction you came from) Go over the methods with the class to do this so that they know how to shoot the back azimuth accurately. (Students should end up in the same exact spot they			

came from. Instead of going north now go south, etc.)			
Informing Task: When I say go, return to the spot that you started at on the sideline of the football field and have your paper bag ready. Wait for further instructions. Go.			
	Now place the cone down at your feet.		
	Next, place the paper bag over your head so that you can only look down and see the compass and not out across the field.	You can look down at your bearing to help you.	
	Now the same bearing as before and walk 50 paces in the direction of their bearing.		
Have the students do this activity twice.	Once they get there have them stop and shoot a back azimuth. The students should try to walk back using their back azimuth to the cone that they started at.		
Informing Task: When I say go, find a partner and wait on the line. Once you are there I will give one of the partners a bearing. This partner must walk 50 feet using this bearing and then return and try to come as close to the starting point as possible. The next partner will be given a different bearing and must do the same thing. Try to be as close to the starting point as possible. Time isn't an issue. Go.			
Give the first group a bearing. Have them complete the task.			
Give the next students a bearing to follow. Have him/her complete the activity.			
The partners that are closest to the starting point are rewarded by the other partner taking the cones and compasses in to the storage room.			
Closure/Assessment: Have students write the answers to the following questions. 1. Why is important to know what a back azimuth is? 2. Describe your difficulty level when the paper bag was on your head.			

Orienteering assessment 13
Assessment

Name_____ Date_____

Please print the answers to the following questions.

1. Why is it important to know what a back azimuth is?

2. Describe your difficulty level when the paper bag was on your head.

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #17

Objectives: (Specific, Behavioral, Assessable)

1. By the end of class, students will be able to identify various components of a compass by telling their partner. (Base, dial and magnetic needle.) **(NASPE 2, EALR 2.3)**
2. By the end of class, students will know how to determine a bearing to a landmark by finding the landmark, using their compass. **(NASPE 2, EALR 2.3)**

Teacher Objectives:

Equipment: (for a class of 30 students)

- 15 compasses (1 for each pair)
- 15 plastic bags

Instant Activity: "Bag chase" You need to get the class into partners. Each partner has a plastic bag. They stand five feet apart and throw the bag into the air. While the bag is in the air the partners need to run and catch their partner's bag. To make it harder increase the distance between the two partners.			
Set Induction: Have any of you read the book Hatchet? It was about a boy who was in a plane crash and landed on some deserted island without any sense of direction. He knew he had a better chance of someone finding him if he were on the outer part of the island instead of the center of the island in the thick brush. But it took him a really long time to find the outer part of the island. If he had had a compass, he would have found the outer part of the island and been rescued a lot sooner. Today we are going to learn how to read a compass so if we're ever lost, we'll be able to find our way.			
MAF/Instructional techniques	**Extensions**	**Refinements**	**Applications**
Students should gather around the teacher so they can hear. Give a review of cardinal directions. The teacher should then go over the parts of the compass and explain to the students why and how they work. (Base, dial, and magnetic needle) You always want the base arrow pointing where you are going. Set the dial so the magnetic arrow matches up with the permanent arrow (inside the compass). When you give the students a landmark they need to find the bearing (degree the landmark is at). If you give the students the bearing (degree) they should be able to find which direction they need to go.			
Informing Task: When I say go, I would like for you to find a partner that is wearing the same color shirt as you. Then line up with your partner and follow me outside to the field. From there I will give further directions. Go.			
Give each set of partners a compass.			

Go over the compass and its components once more with the students to make sure that they all understand how it is used.			
Informing Task: When I say go, I would like for you to face the base of your compass towards the evergreen tree (landmark) and set your dial to that tree. Raise your hand when you think you've got the correct degree and I will come make sure you're doing this task correctly. Go.			
Do this with numerous landmarks until you feel sure that the students know how to use their compasses to find a desired landmark.			
Informing Task: When I say go, I would like for you to set your bearings at 90 degrees and walk 50 paces in that directions. Stay put when you've reached your destination. Go.			
Make sure that each pair of students are doing their own work. Not just going to the same points other students are going.	Now that you have reached your destination, I would like for you to walk 50 paces at 180 degrees. When you have reached your destination stay where you are at until I give further instructions. Good job! I'm glad you've reached your next destination, now I would like for you to walk 50 paces at 270 degrees.		
Students should now be at the same place they originally started.	Your final destination is to walk 50 paces at 360 degrees.		
Give the students numerous objects to shoot a bearing at. (tree, building, door, etc)			
Do this as many times as necessary until you are sure that they know how to shoot a bearing correctly.			
Closure/Assessment: Have the students gather around the teacher and take a seat. 1. Go over the components of a compass and have the class explain what they are.			

2. Pick a volunteer to shoot a bearing to an object of your choice.
3. Class discussion: Determine a level of knowledge relating to a compass and basic directional references by asking students to raise their hands to prompted questions. (EX: What happens to the magnetic needle when you turn the dial to 245 degrees?)
4. Can the students determine a general direction in a relation to specific point/landmark?
5. Do students use the correct techniques to determine bearings? Determine this by asking certain students to demonstrate how to determine bearings.

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson Plan #16

Objectives: (Specific, behavioral, assessable)

1. By the end of class students will be able to set up a safe and proper campsite by setting up a tent and knowing where to put it. **(NASPE 2,5 EALR's 2.3,3.1,3.3)**

Teacher objectives:

Equipment:

- 6 four person tents
- 1 stop-watch
- 30 papers
- 30 pencils

Instant Activity: None			
Set Induction: How many of you have been camping? Where did you go? Who did you go with? How many of you actually help set up the tent on your campsite? After today you will be a master camper! You will learn how to set up a tent and know the safe places to put it.			
M.A.F.	**Extensions**	**Refinements**	**Applications**
Before class begins, place six tents out on the field, spaced far enough away from each other (at least 15ft. away from each other). Have the tents still in bags so the students can see how it should look when they put it away.	It is important in orienteering to know how to set up a tent for the overnight orienteering trips that you can go on when you get good at it. Tents are important because they provide shelter from the weather, as well as safety from animals that may be attracted into the campsite.		
Informing Task: When I say go, I would like you to line up on the end line of the basketball court. Go. Now I am going to count you off by six's (do so by counting down the line. Do not allow them to switch groups). Now that you have your groups when I say "go" I would like you to follow me out t the field where we will practice setting up a tent.			
Make sure students are in groups of five. Have students gathered around you so they can hear you and see you.	The first thing I want to discuss with you is an appropriate place to set up your tent. Can anyone tell me where or where not to set up a tent? My advice to you is not to put it up under any electrical wires, not by your campfire and not on any rocks, hills or slopes. Can anyone tell me why it would be important to know how to set a tent up correctly? (Weather conditions, don't want it falling down at night, do not break anything. How can tell me why it would be important to set the		

	tent up quickly? (Raining, tired, set up camp quickly, ect.)		
Pass out flyer with all the steps on it. (See attachment 3). Pass out check list of materials. (See attachment 1) Demonstrate the first three of how to set up a tent. Then allow the students to do the first three steps to their tents. (step 1: lay the tent out, step 2: put the poles together, step 3: figure out where the poles go before putting the poles into the tent.	Once you and your group get to your tent the first thing I want you to do is check off this check list of materials. Do so by initialing the blank space. The first step in assembling your tent is to lay the tent out flat. The second step is to assemble all of the poles. The third step is to figure out where all the poles are suppose to go before just putting them in.	When getting your tent out be sure to pay attention to how it is in the bag because I expect it to look that way at the end of class. Step one is to get the tent out of the bag, unroll it and lay it out flat in a safe area that we talked about. Step two is to assemble all the poles. To do this you unfold the poles if they are connected with a line in the middle or slide the ends together one piece at a time. Step three is to figure out where all the poles will go in the tent. Do so by using the longer poles to intersect in the middle (look for the sleeve that the poles go in) and the shorter poles will be parallel on the sides (again find the sleeve). I like to lay them on top of the tent before I put them in, to make sure I find a place for all of them. (See Skill Charts 2,3 and 4)	
Informing Task: When I say Go, find a tent and start by checking off that all the materials are there. Then begin on steps one-three. You're your group is finished with the first three steps come and see me. GO.			
Now demonstrate the next three steps (use students for help if you need it.) Step 4: put the poles in their correct places, step 5: have one person stand at each corner, and put the straight part of the hook in the end of the pole.	Step Four is to slide the poles into their proper spots. Step five is to have one person at each corner and connect the ends of the poles with the hooks at each corner. Step six is hammer in the stakes. Be very careful with the hammers you do not need to	Step four is to slide the poles into the sleeves that you found in step three. Do so by pushing them into the sleeves, not pulling because you do not want the poles to come apart. Step five is to have one person at each corner and connect the ends of the poles with	

Step 6: put the stakes in the ground. Step 7: put the rain tarp on.	hit the stakes very hard. Although sometimes you may have to. Step seven is to put the rain tarp on. This is the last thing to complete the tent.	the hooks at the bottom. Do so by placing the long part of the hook into the end of the pole. Step six is to push/hammer the sakes into the ground. Do so at about a 45 degree angle and in the circles in each corner of the tent. Push or hammer until the angle at the end of the stake is latched the circle to the ground. Step seven is to put the rain tarp on. The last pole belongs to the rain tar (it should be the shortest). It goes directly down the center of the rain tarp and hooks into little pockets. Have one student at each side and slide the tarp over the tent so it is equal on all sides. Find the shaps handing in all corners and snap them to the latch at each corner. (See Skill Charts 5, 6 and 7 for these steps)	
Informing Task: When I say, “Go”, you and your group go back and work together to finish putting your tents up by completing the steps as described. Again when you are finished come and circle around me for your next directions. Go.			
Make sure safety precautions are being used. (No fighting with the poles, wrapping each other up in the tent.) As they are finishing up with the first seven steps walk around and make sure they did the steps correctly. When students are done a	Step eight is taking the tent down. There are many steps involved in this one step.	Step eight is the most important step because to take the tent down you have to walk backwards through the steps. Start by people in each corner unconnecting the poles with the hooks. Allow the tent to collapse. Take the poles out (again push do not pull and break the poles). Breakdown the poles by pulling them apart, then place them all into the bag they	

circled around begin to explain step 7.		came in. fold the tent in ½ twice and then roll it up, allowing the air to slowly come out so your tent will be as compressed as possible.	
Informing Task: When I say, "Go", I would like for you to go back to your groups and begin the take down process. Remember to be very safe and do not mess around with the equipment. What are we going to do? (Take down) "Go."			
Make sure safety precautions are being used. Make sure tents are being completely taken down. (all poles out, collapsed, folded, rolled and in the bags)	Allow the groups that do this quickly to try to put the tent back up faster this time.		
Make sure safety precautions are being used.	Take tent down again as fast as you can.	Remember to be safe and not poke anyone with your poles or stakes.	
Informing Task: When I say go, I would like for you to race against each other in putting up a tent. You need to make sure you remember all eight steps. When the rain tarp is snapped on I will know your group is done. "Go."			
Make sure safety precautions are being used. Make sure each group is completing the steps. Use your stop-watch to time each group.			
Monitor to make sure they do this safely.	Take down your tent and put all your supplies away as you found them.		
Closure/ Assessment: On your pieces of paper I would like for you to list five of the seven steps it takes to put up a tent properly. I would also like for you to list three things to watch out for when setting up your tent. List the seven steps again and the three things to look out for once all the students have completed.			

Check List for Tent Materials
Lesson 16

Starting Materials

_____ **Tent**

_____ **Four Poles**

_____ **Four Stakes**

_____ **Rain Cover**

Ending Materials

_____ **Tent Shell**

_____ **Four Poles**

_____ **Four Stakes**

_____ **Rain Cover**

Orienteering assessment 12
Tent assessment

Name_____ Date_____

On this piece of paper I would like for you to list five of the eight steps it takes to set up a tent properly, and three environmental factors to look out for when doing so.

<u>Tent steps</u>

1.

2.

3.

4.

5.

<u>Environmental Factors</u>

1.

2.

3.

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson Plan #15

Objectives: (Specific, Behavioral, Assessable)
1. By the end of class, students will be able to calculate: travel time, stride lengths, distance and steps. **(NASPE 2 & 5, EALR 1.1.2)**
2. By the end of class, students will be able to know why it is important to know all of these aspects in orienteering. **(NASPE 2, EALR 1.1.2)**

Teacher Objectives:

Equipment: (for a class of 30)
- 15 pieces of paper
- 15 markers
- 30 pedometers
- Give students maps from lesson 12
- 15 tennis balls
- 1 overhead
- 1 example map (clear overhead sheet)

Instant Activity: Tennis Ball Drop. Have students break into pairs with one tennis ball per pair. Students should be facing each other starting out about 5 feet from each other. One student (student A) is the "ball dropper," the other student (student B) is the "ball chaser." Student A will hold their arm straight out and drop the tennis ball, student B will then try to catch the tennis ball before the ball hits the ground. Have student A drop the tennis ball 8 times and then have students switch roles. Once students are able to catch the tennis ball, have students take steps backward from each other.			
Set Induction: How many of you know exactly how long it will take you to walk from your house to school, walking normally-not rushed? Today we are going to learn how long it will take to get from one point to another using your normal stride lengths.			
M.A.F.	**Extensions**	**Refinements**	**Applications**
Be sure the students have their maps and calculations from previous day's work.			
Informing Task: When I say go, I would like for you to get with the same partner you were with yesterday and calculate travel time per step it will take you to get from each designated point to point on your maps. Use the times you wrote down from yesterday. Go.			
Make sure students understand they need to calculate travel time between EACH of the points designated on their maps. Be sure to give enough time to ensure they have all of their travel times marked down.	To calculate your travel time, you will need to divide time by the number of steps taken. (which equals their travel time per step)	Remember, you will need to calculate travel time between each of the points designated on your maps. Don't leave any point(s) out.	
Informing Task: Now that you have an understanding of travel time, when I say go, I would like for you to find two places on your map that were not direct routes (not directly by each other on the map) and estimate how many steps and how much time it will take for you to get from one point to the other. Write your estimations down on your sheets of paper. Go.			
Be sure students understand what you are asking them to do by showing them on a map on the overhead. Give students enough time to make the desired calculations. This should take students	After you have made your estimations, find out the actual amount of time and steps it will take you to get between your two new points.		Remember to pick two new points. Points you didn't place together on your previous calculations.

through the end of the period; if not have them pick two more new points to estimate.			
Closure/ Assessment: On your sheet of paper, write down the actual calculations next to your estimates. Describe why your estimates and calculations were the same or different. Describe something new you learned today and how you'll be able to use travel time in your everyday lifestyles. For tomorrow's lesson, I would like for you to bring a pillow or blanket.			

Orienteering Assessment 11

Name:_____
Date:_____

Please fill in the following chart as you work.

Start point on map	End point on map	Estimated steps	Actual steps

1. What was something new you learned today?

2. How do you think knowing about travel time will be useful in the future?

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson Plan #14

Objectives: (Specific, Behavioral, Assessable)
1. By the end of class, students will be able to implement a variety of techniques to approximate actual distance and travel times between two locations on a map to scale and personal stride lengths. The students will do so by calculating their stride length with travel times. **(NASPE 2& 5, EALR 1.1.2)**

Teacher Objectives:

Equipment: (for a class of 30 students)
- 100' tape
- 150 yards of crate paper cut in 10 yard sections
- Washable paint
- Shallow pan (to put paint in)
- 1 pedometer per student
- Give students maps from lesson 12
- 15 markers
- 15 sheets of paper
- 15 bean bags

Instant Activity: Bean Bag Tag. Everyone needs to have a partner. The partner who is on the right needs to go and get a beanbag. The object of the game is to throw the beanbag at your partner's feet. If you hit your partner's feet you are allowed to pick up the beanbag and have another shot. If you miss your partner's feet your partner now has a chance to hit your feet. Keep track of how many times you hit your partner's feet.			
Set Induction: Have you ever looked off in the distance and wondered how far away some mountain was and maybe made a guess on how long it may take you to get there? Today we are going to learn how to determine the distance between two points, and measure them with our stride lengths.			
MAF/Instructional techniques	**Extensions**	**Refinements**	**Applications**
Informing Task: When I say go, I would like for you all to sit quietly around me ready to listen for today's lesson instructions. Go.			
Give each student a pedometer.	In our last lesson, we touched on how to read maps and different aspects of a map. One of the things we covered was the scale of a map. It is important to have a scale listed on a map so the person reading the map is able to identify different placements/objects on a map in comparison to actual life. So accurate measurements are important.		
Informing Task: When I say go, I would like for you to find a partner and follow me outside. Go.			
Make sure everyone has a partner. Give students a piece of paper and pencil per pair. Each pair of students should have a 10 yard piece of crate paper. Switch and the other partner does the same.	You are now going to measure your partners' stride length. You will do this by placing your bare feet into the tub of paint and walking across the crate paper. Make sure your pant legs are rolled up in so you don't get any paint on them. After the third step, start measuring each place your partners foot hits the ground. The distance between each mark on the crate paper is your stride length. Switch and do your partner's stride length too.		
	Have the students set their pedometers to their measured	Remind them to get the time it takes to get from one point to the	

	stride lengths. You do so by pressing mode over until the arrow at the top is on stride length. Then you press set. Then set the stride to what ever it is. Press mode to get back to the number of steps.	next when doing this activity.	
Informing Task: When I say go, we are going to measure from each point to point on all the designated spots on your maps. Go.			
Give students remainder of period to figure out their stride lengths in relation to steps and time.	You will need to measure how far or the distance between your steps, the number of steps taken between the two distances and the time it takes between the two points measuring with your pedometers.		
	Stride length is important when trying to figure out the distance you are going to be covering. Everyone's stride length is different, so travel time is different for everyone. It is good to know your own stride length and travel time so you can estimate your schedule accordingly.		
Closure/ Assessment: On your sheets of paper, describe why it is important to know your stride length.			

Orienteering Assessment 10

Have students explain how to measure stride lengths while demonstrating the technique. You should be observing the students ability to take correct stride lengths throughout the lesson- help those students that need it. By the end of the class period, walk around to each pair again and mark off whether they are able to take stride lengths correctly as you taught in class. Here's an example of what an assessment "check-list" would be for this lesson. Jane would have received a 2/3 with this informal assessment.

Students Name	Date Observed	Steps are counted after 3rd step	Steps are being considered in relation to time	Pedometers are being used correctly
Jane Smith	11.28.2005	X		X

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson Plan #13

Objectives: (Specific, Behavioral, Assessable)

1. By the end of the class, students will be able to identify features of the land by deciphering contour lines on a map. **(NASPE 2, EALR 1.1.2)**
2. By the end of the class, students will be able to relate to the concept of contour line. **(NASPE 2, EALR 1.1.2)**

Teacher Objectives:

Equipment: (for a class of 30 students)

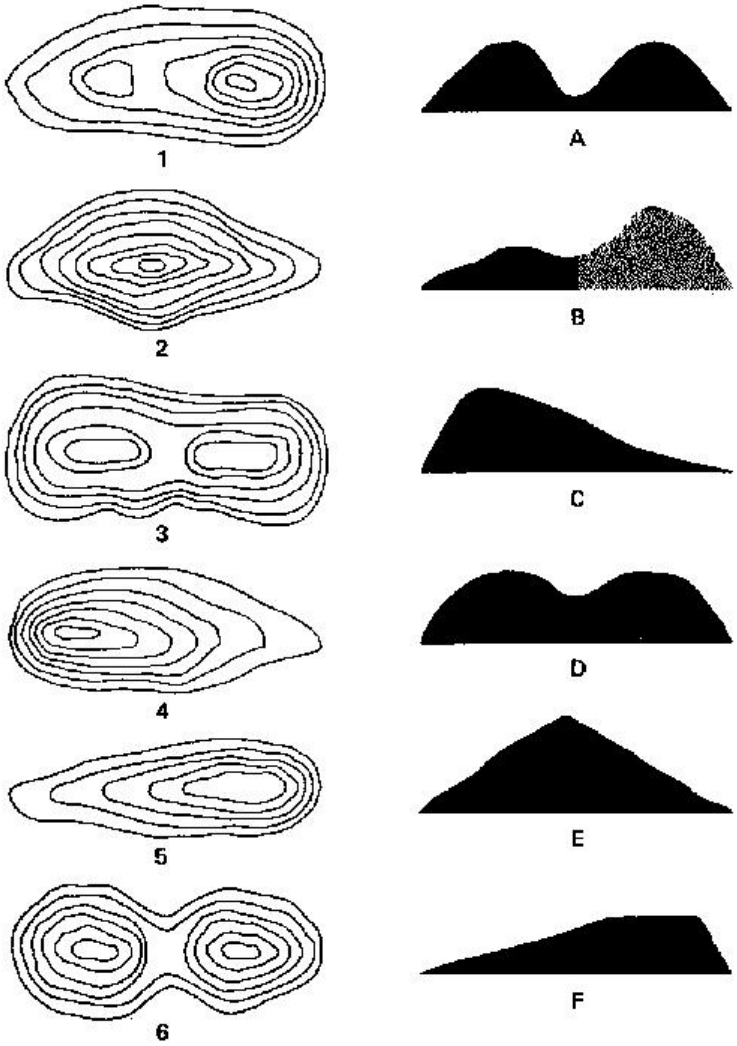
- One map for each pair of students
- One quiz for each student (30)
- Overhead projector
- Overhead transparences
- One Contour matching worksheet per student
- 15 bean bags

Instant Activity: Bean Bag Tag. Everyone needs to pick a partner and be standing shoulder to shoulder with your partner, you have 10 seconds, Go. The partner who is on the right needs to go and get a beanbag and return to where your partner is standing. The object of the game is to throw the beanbag at your partner's feet. If you hit your partner's feet you are allowed to pick up the beanbag and have another shot. If you miss your partner's feet your partner now has a chance to hit your feet. The partner without the bean bag should be trying to dodge the bean bag by jumping, hopping, running, etc. Keep track of how many times you hit your partner's feet. Raise your hand if you have any questions.			
Set Induction: Have you ever wondered how high a mountain is? Today we are going to learn how to read a map. By the end of class we should be able to figure out elevations and landforms by learning what a contour line is and why contour lines are used.			
MAF/Instructional techniques	**Extensions**	**Refinements**	**Applications**
Keep students in their pairs from the Instant activity. Have overheads of various land formations and their equivalent picture with contour lines. Overheads found at the end of this lesson. (see attachment 4 & 5)			
Informing Task: We are going to go through an activity where I lead you through a path on a map on the overhead. When I say go, I would like you to discuss with your partner what type of land formation we are "going" by and whether we are traveling up or down hill. You can discuss with your partner while I'm teaching just keep 6 inch voices, what I mean by using 6 inch voices is that someone 7 inches away from you should not be able to hear you talk. Go.			
Hand out one contour quiz to each student. Each pair of students will complete a "contour quiz". The quiz will be taken during class discussion.	Now, since we have gone over the different contour lines and land formations, I would like for you to complete this contour quiz.	Remember to only look at your paper, if I catch you cheating in any way, I'll take your paper away and you will receive a zero on your quiz.	
The contour quiz will be graded in class to ensure full student understanding.	I would like for you to switch papers with your partner.	We are going to now grade the quiz together, so I expect you to be honest and mark the question wrong if it is wrong. If you have any question about the quiz answers, please raise your hand to ask.	

Each student will be given a detailed contour map of a given area. (We chose a site just southeast of Arlington, WA) There will be two “Points” along with a corresponding letter on the map.	Now I would like for you to complete a contour worksheet on which you identify specific geological formations on the map provided.	Examples of what you will be doing on the worksheet are: identifying a cliff, valley, mountain, peak etc.	You can try to complete this in class, but worksheet will probably be homework.
Closure/Assessment: Conclude the lesson with a discussion on topographical features. Students will take a quiz on topographical features and their relationship with contour lines. Handout homework. (Contour Matching Worksheet) Homework due tomorrow.			

Contour Matching Worksheet

The purpose of this activity is to aid in the interpretation of topographical maps. Match the contour representation of the figure on the left to the outline of the hills on the right.



Contour Map Quiz for Lesson 13

1. What is the elevation north of Hermlock Road?

2. On this map how many feet of elevation change is there between each contour line.

3. What is the highest elevation on the map? How do you know?

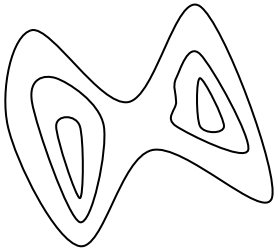
4. How many hill tops are there?

5. Is there any flat ground on the map? How do you know?

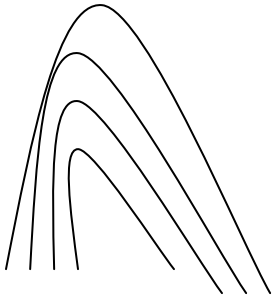

Wood Hollow
Kinzua
(historical)
Jakes Run
Hemlock Rd
Harmon
Island
Big Bend
Allegheny
Reservoir
Jakes Rocks Rd
Canal Route
Fr 284

Overhead transparencies to be used during in class quiz. (lesson 13)

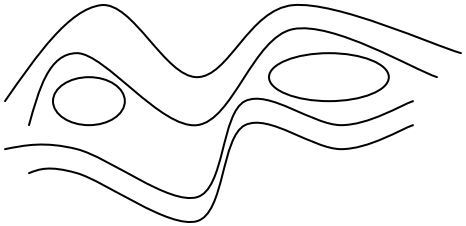
Hills and Saddle



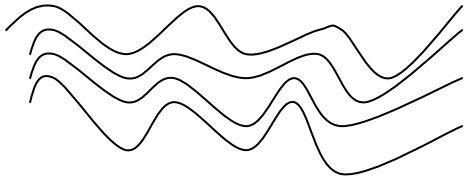
Valley



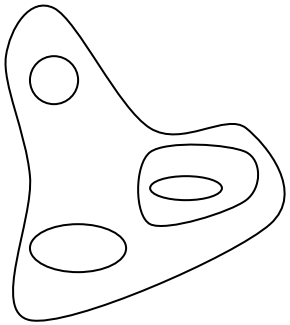
Ridge



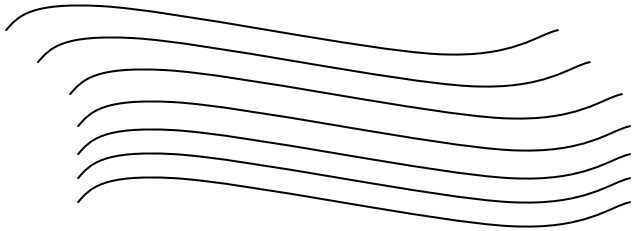
Spurs & Re-entrants



Knolls & Depression



Different Slopes



Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #12

Objectives (Specific, Behavioral, Assessable)

1. By the end of class, the students will have finished their maps. **(NASPE 5, EALR 1.1.2)**

Teacher Objectives:

Equipment: (for a class of 30 students)

- 30 Rulers
- 30 Pencils
- 30 colored pencils/ crayons
- 30 Papers to draw maps on
- 30 Copies of school grounds measurements students worked on in previous lesson

Instant Activity: Tennis Ball Drop. Have students break into pairs with one tennis ball per pair. Students should be facing each other starting out about 5 feet from each other. One student (student A) is the "ball dropper," the other student (student B) is the "ball chaser." Student A will hold their arm straight out and drop the tennis ball, student B will then try to catch the tennis ball before the ball hits the ground. Have student A drop the tennis ball 8 times and then have students switch roles. Once students are able to catch the tennis ball, have students take steps backward from each other.

Set Induction: Today is the day. Our maps will be finished by the end of class and we will all be well on our way to being great map makers!!

MAF/Instructional techniques	Extensions	Refinements	Applications
Students are to get started as quickly as possible. Make sure that students are on the right track. Encourage them to use color or do anything else that will make their maps more attractive.		You should use color and do anything else that will make your maps more attractive.	

Informing Task: When I say go, I would like for you to get started on your maps. Remember that I would like them to be finished today. If you have any questions, please ask me. Go.

Walk around and help students to make excellent, accurate maps.		Remember to make sure your maps will be legible to anyone who picked it up.	If you get done early, I would like for you to find at least two more things on school ground to measure and draw on your maps.

Closure/Assessment:

If time allows, have the class share their work with each other.

I want you to show me what you have accomplished today.

- Is your map finished?
- Is your map detailed?
- Is your map readable?

Orienteering Assessment 8

Name:_____
Date:_____

Towards the end of class you should make sure you have the following “check-list” done. I will come around to make sure your maps are at least half way done, and done correctly. If you have any questions, you should ask me when I come to see your map.

- ☐ Is your map made to scale?

How would someone looking at your map know your map is to scale? Describe below.

- ☐ Does your map include symbols?

Is it clear what each symbol means? How? Describe below.

- ☐ Is your map easy to read?

If I had never looked at a map before and was trying to follow your map, could I do it easily without needed an explanation? Describe below.

- Is your map detailed? Is it attractive to the eye?

Please list the different colors on your map and what each color represents on your map in the space below.

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #11

Objectives: (Specific, Behavioral, Assessable)

1. By the end of class, the students will draw a detailed map to scale of the school grounds. **(NASPE 2, EALR 1.1.2)**
2. By the end of class, the students will understand why a map drawn to scale is important. **(NAPSE 2, EALR 1.1.2)**

Teacher Objectives:

Equipment: (for a class of 30 students)

- Paper
- Rulers
- Pencils
- 30 sets of colored pencils/ crayons
- Paper to draw maps on (30)
- 1 Overhead projector

Instant Activity: None

Set Induction: Today we are going to start drawing maps of the school. Remember when we looked at maps the other day? Take into consideration how detail helps. You should make your maps as colorful as necessary to be read easily.

MAF/Instructional techniques	Extensions	Refinements	Applications
Students will draw individual maps of school grounds. The students are to use the measurements that they got from previous lessons.			

Informing Task: When I say go, you will be drawing maps of the school grounds. You will have today and tomorrow to finish them. If I were you I would start by getting all of the boundaries and buildings drawn in first. Remember that the maps should be drawn to scale and the scale should be displayed at the bottom. Be as specific as possible. Keep the maps simple yet detailed enough that somebody that isn't familiar with our school could use your map to navigate easily. Go.

The teacher should help the students get started. The hardest part may be drawing the maps to scale. If need be, show the students an example of drawing the map to scale. Do this on the white board or the overhead projector.	By the end of class students should be at least half way done with their maps.	Make sure to include as much detail as possible. The more detailed your map is, the easier it will be to read. Your map should be made to scale. This means that you need to convert the real measurements to measurements that are to scale on your map. (Give students an example: 1 inch is equivalent to 10 feet)	

Closure/Assessment: If students would like, they may take their work home with them to ensure that they get their work done on time.

Teacher: I want you to show me what you have accomplished today.

- Students should be at least half way done with their maps.
- Are they to scale?
- Are there symbols?
- Is the map easy to read?
- How detailed is the map?
- (Remember that this is the first day of two that they will be working on them)

Key for attachment #2

Key:

Bus area:

Scale: 1 inch = 25 feet

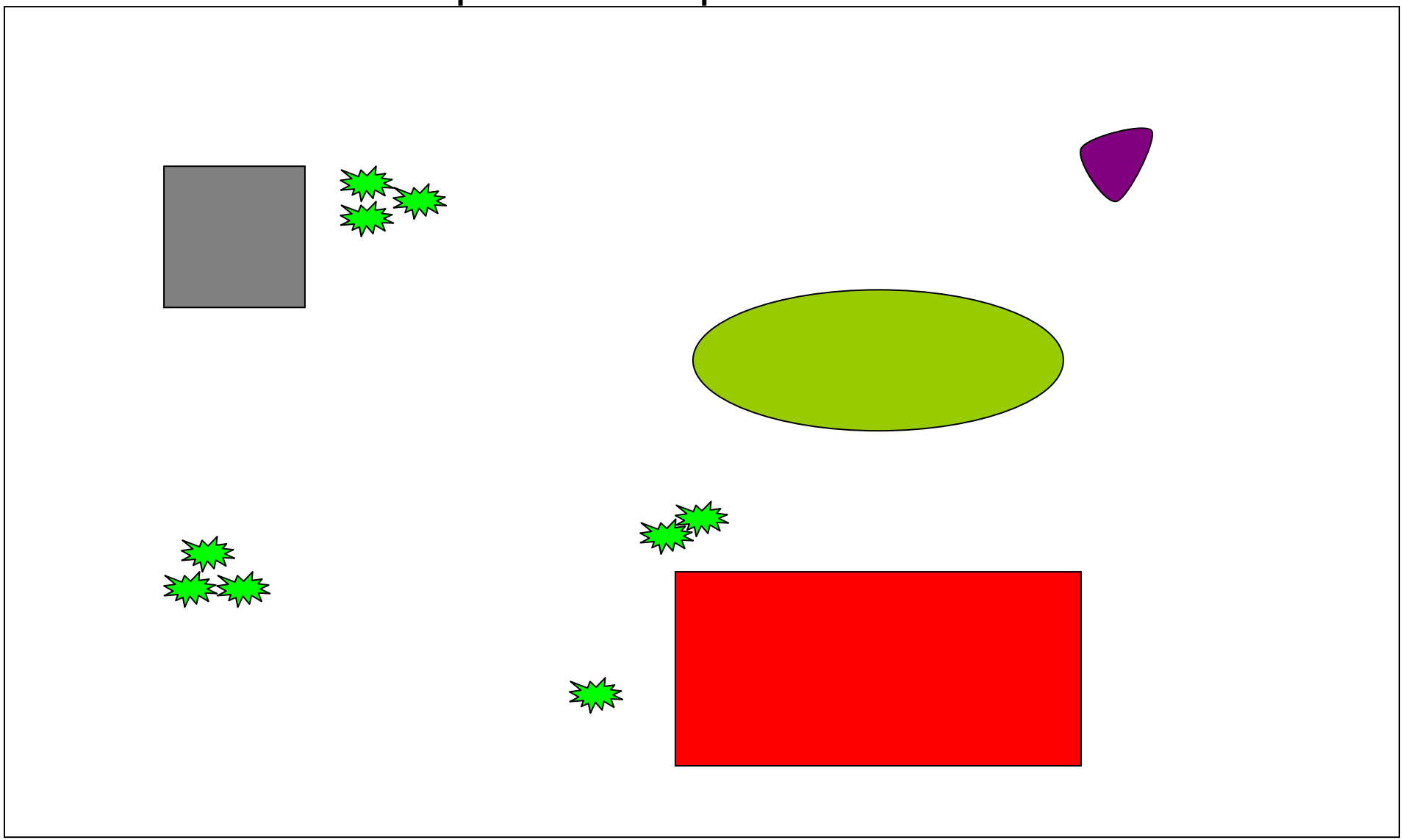
(----------)

School:

Tree:

Football Field:

Example of what a map should look like:



Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson # 10

Objectives: (Specific, Behavioral, Assessable)

1. By the end of class, students will finish getting their measurements of the school grounds. **(NASPE 5, EALR 1.1.2)**

Teacher Objectives:

Equipment: (for a class of 30 students)

- 3 distance wheels (tool you push on the ground that measures distance)
- 3 100' tape measures
- 30 Pencils
- 30 Papers

<table>
<tr><td colspan="4">Instant Activity: None</td></tr>
<tr><td colspan="4">Set Induction: Tomorrow we will be constructing maps of the school grounds. With that in mind, today we need to finish getting measurements. So let's go to work.</td></tr>
<tr><th>MAF/Instructional techniques</th><th>Extensions</th><th>Refinements</th><th>Applications</th></tr>
<tr><td>The students will be out to finish getting measurements. They will have the entire class to finish getting the measurements as accurately as possible.</td><td></td><td></td><td></td></tr>
<tr><td colspan="4">Informing Task: When I say go, you may go out and get started on finishing up your map measurements of the school grounds. Remember that today is the last day to get measurements so try to get them done. If any of you need help I will be around so I will assist you. Go</td></tr>
<tr><td>The teacher should help as much as possible to ensure that the students get their work done. It is important for the measurements to be completed so the students will be able to start their maps tomorrow.

Teacher can add or delete things to be measured as he/she desires.</td><td></td><td>Remember to get measurements of perimeter of school grounds, measure main building, gym, play area and cafeteria.</td><td></td></tr>
<tr><td colspan="4">Informing Task: (For those students who finish early) When I say go, estimate the amount of step it would take you to walk the perimeter of the school grounds you've already measured. Once you've written that estimated number down, go out and count the number of steps it actually takes to walk the perimeter of the school grounds. Go.</td></tr>
<tr><td></td><td>If your group finishes early I want you to go help the groups that aren't finished yet. You are to help them, not give them your results.</td><td></td><td></td></tr>
<tr><td colspan="4">Closure/Conclusion: Nice work today.
1. Was your estimate close to the actual number of steps it took to walk the perimeter of the school grounds?
2. What information can you gain from this exercise?
3. Now, knowing the information you've learned today, how many steps do you think it takes to walk the dimensions of the gym? The next time we meet we will start our map work.</td></tr>
</table>

Orienteering Assessment 7

Name:_____
Date:_____

4. Was your estimate close to the actual number of steps it took to walk the perimeter of the school grounds?

5. What information can you gain from this exercise?

6. Now, knowing the information you've learned today, how many steps do you think it takes to walk the dimensions of the gym? The next time we meet we will start our map work.

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #9

Objectives (Specific, Behavioral, Assessable)
1. By the end of class, the students will have measurements to develop a map of the school. **(NASPE 2, EALR 1.1.1)**
2. By the end of class, the students will understand how maps are made to scale. **(NAPSE 2, EALR 1.1.2)**

Teacher Objectives:

Equipment: (for a class of 30 students)
- 3 distance wheels (tool you push on the ground that measures distance)
- 3 100' tape measures
- 30 pencils
- 30 pieces of paper

Instant Activity: None.			
Set Induction: How many of you have had to give somebody directions? Sometimes it can be very difficult to make the instructions clear. Today we are going to make a map of the school. This map will be very specific and will enable directions to be very clear and concise.			
MAF/Instructional techniques	**Extensions**	**Refinements**	**Applications**
Break the groups up into groups of 10. (3 groups total) Give each group a distance wheel, 100' tape measure, pencil and paper.		Measure Twice to make sure your measurements are accurate. Write the measurements down as you go so you don't forget. This isn't a race of who gets done first, do a good job getting your measurements.	
Informing Task: When I say go, I would like for you to sit with your group around me, facing me so I can give you some more tips on how to get your map measurements for the day. Go.			
Send the three different groups out in different directions. The teacher is to go out and help the students as much as possible.	I would like group one to start in the far north east corner of the boundaries. Group two is to start in the far south west corner of the boundaries. And group three should start in the far north west corner of the building.	It is usually easier to get the boundary measurements if you start from the very farthest measuring point and then work inward. Make sure to measure as accurately as possible, using your distance wheel and tape measure. Be sure to measure the school boundaries, main building, gym, play area (field area), cafeteria, and whatever else you would consider important to measure. The more measurements you get the easier it will be in the next few days to develop the map.	
Informing Task: When I say go, I want you to go out with your groups and get measurements around the school grounds. Use the			

<table>
<tr><td colspan="4">measurement tools to get the correct measurements. I recommend drawing a “rough draft” map as you go. Work together to be as precise as you can. When you hear me blow the whistle I would like you to come back to class as quickly as possible. Go.</td></tr>
<tr><td>Allow the students the majority of the class period to get their measurements done correctly.</td><td></td><td></td><td></td></tr>
<tr><td colspan="4">Closure/Assessment :
Nice work today. Tomorrow we will finish getting the measurements.
In your pairs, find another pair and compare your measurements.
Please raise your hands and tell me what you got for the measurement of the perimeter of the school grounds.
Are there any questions about the assignment and what we will be doing tomorrow?</td></tr>
</table>

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Orienteering Assessment 6

Name:_____
Date:_____

For the following questions, try to remember the discussion we had about getting school measurements correctly and efficiently. **Remember to answer in complete sentences.**

1. Did you use the same measuring technique for everything you measured?

2. Pretend like you are describing to a friend outside of our class how to measure the perimeter of the school grounds. List in detail the steps you would take to make sure you have an accurate measurement of the school grounds.

3. What do you think was the hardest distance (object) to measure? Why?

4. What do you think was the easiest distance (object) to measure? Why?

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #8

Objectives (Specific, Behavioral, Assessable):
1. By the end of the class, students will have a firm grasp on the details of a map. This will include symbols, landmarks and how the map is made to scale. **(NASPE 2, EALR 1.1.1)**

Teacher Objectives:

Equipment: (for a class of 30 students)
- Maps for 30 students
- Map worksheets for 30 students

Instant Activity: None			
Set Induction: If you were lost in the woods would you be able to find your way out? Today we are going to work on the skill it takes to be able to get out of the woods without worrying about how long or if you'll ever find your way out of the woods.			
MAF/Instructional Techniques	**Extensions**	**Refinements**	**Application**
Students will work in pairs Teacher will hand out topographical maps (one per pair)			
Informing Task: When I say go, I would like for you to raise your hand with an important piece of information from your map. Go.			
Teacher will be primarily lecturing. Teacher will place information provided by students in a Venn diagram on the board. Teacher will introduce appropriate symbols with a worksheet. Teacher can add more to lecture if desired.	(Point to map as you give appropriate symbols) This is a scale; the scale indicates the distance on a map in comparison to the actual distance on land. Water areas are generally blue. Hills and valley are marked by contour lines. Vegetation is marked by different colors of green, either solid or shaded. Railroads or roads are marked by black lines which are either solid or dashed.		
Informing Task: When I say go I would like for you to pick up a worksheet and begin working on it in your pairs. Go.			
Teacher gives allotted time to fill out worksheet.			
Closure and Assessment: What information can you find from the map in front of you? Create a brief story based on information you found from the map.			

Worksheet for Lesson #8
Name:_____ Date:_____

1. What is the scale of the map?

2. What maps would you need to put this map in a larger context?

3. What date was the map published?

4. Find a railroad. What direction is it running?

5. Find a swamp. Write down the latitude and longitude where it is located.

6. Create a brief story based on someone who might live in the location of the map.

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson # 7

Objectives (Specific, Behavioral, Assessable)
1. By the end of class, students will have a firm grasp on the details of a map. This will include symbols, landmarks, and how the map is made to scale. **(NASPE 2, EALR 1.1.1)**

Teacher Objectives:

Equipment: (for a class of 30 students)
- 30 maps
- 30 Computers with online capabilities

Instant Activity: None			
Set Induction: Maps are used daily. Most of you have probably used a map when you have gone on hiking trips or road trips. Today we are going to look at maps and by the end of class we will know all the details of a map.			
MAF/Instructional techniques	**Extensions**	**Refinements**	**Applications**
Today's lesson will consist entirely of work time. The students will receive a worksheet. They are to work on the worksheets alone. The students may assist each other, but everybody must complete their own worksheet.			
Informing Task: When I say go, you will be given the opportunity to answer questions in regards to a map. Before you start the worksheet I suggest that you find a map on-line that will help you answer the questions on the worksheet. You will be given the entire class period to do the worksheet.			
Hand out the worksheets. Get the students started as quickly as possible because the assignment will take the entire class period. As the students are working on the assignment go around the class and assist them if they need help. The worksheet will include questions about geographic features, symbols, directions (North, South, etc.), and the scale of the map. When the students are finished with the map worksheet then they should have a good grasp on the details of a map.	Helpful websites may include: google, yahoo, askjeeves, etc.		

Closure/Assessment: Today should have given you a good idea of what to include on a map to make it as accurate and descriptive as possible.
**The answers to the following worksheet can be found in: Teaching Orienteering by Carol McNeil, Jean Cory-Wright and Tom Renfrew or on-line at http://erg.usgs.gov/isb/pubs/booklets/symbols/

Worksheet for Lesson 7
Name:_____
Date:_____

1. Please list the website of the map you chose to answer the questions to this worksheet.

2. Please draw a description of the following map terms:
    A. Contour

    B. Form line

    C. Depression

    D. Steep Bank

    E. Pond

F. Building

G. Impassable cliff

3. Describe how vegetation is marked in a map symbol key.

4. Describe the difference between a primary highway, secondary highway and light duty road. What do you think these three terms mean in reference to the roads you take everyday? What type of road do you drive on most often?

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson # 6

Objectives (Specific, Behavioral, Assessable)
1. By the end of class students will be able to describe what a compass is and what a map is. Students will be able to explain what these tools are used for. **(NASPE 2, EALR 1.1.1)**

Teacher Objectives:

Equipment: (for a class of 30 students)
- 10 compasses
- 10 Topographic maps
- 30 bean bags

Instant Activity: Bean Bag Tag. Everyone needs to have a partner. The partner who is on the right needs to go and get a beanbag. The object of the game is to throw the beanbag at your partner's feet. If you hit your partner's feet you are allowed to pick up the beanbag and have another shot. If you miss your partner's feet your partner now has a chance to hit your feet. Keep track of how many times you hit your partner's feet. The reason why we are doing this is because be need to have quick feet while playing defense in basketball.			
Set Induction: How many of you have gone on road trips with your families? When you were on those road trips how did you find your way to the destinations? You probably used maps. Today we will be looking at maps and compasses. However, these maps will be a bit different than road maps. These maps will be topographic maps. Do any of you know what a topographical map is? .			
MAF/Instructional techniques	**Extensions**	**Refinements**	**Applications**
Split the class into groups of three.			
Informing Task: When I say go, I would like you to get sit next to each other in your groups of three. Once seated in your groups, gather around me (teacher) and sit down in the area in front of me, be ready to listen. Go.			
Class will mostly consist of lecture. Hand out a compass to each group. Allow the students to handle the compasses and play around with them for a minute. Once you feel that all of the students have gotten a chance to look at the compasses get the classes attention. Have the students set the compass down in front of them but make sure the students are not touching the compasses. (distraction)			
Introduce the class to the compass. Show them the directions (north, east, south, and west), the orienting arrow,			

orienting lines, compass needle, and the directional arrow. Inform the students about how the needle with the “red” end always points to magnetic north. Show the class how to find directions such as “north”, “southwest”, etc.			
Informing Task: Now that we know the components of a compass, I am going to show you how to set a declination. When I say go, follow me outside where we can do this more effectively. Go.			
Choose an object out in the distance that all of the students can see. Explain that a declination is a sloping or bending downward. Explain that an azimuth is the horizontal angular distance from a reference direction, usually the northern point of the horizon, to the point where a vertical circle through a celestial body intersects the horizon, usually measured clockwise. Sometimes the southern point is used as the reference direction, and the measurement is made clockwise through 360°. Shoot an azimuth to the object and get the declination. The students should be gathered around you so that they can see what you are doing and how you	Once you have showed the class how to do it, allow them to do the same. Point out an object and have them get a declination for the object. Each student should get a chance to try.		

got the declination.			
Informing Task: Now that we have a general idea of how a compass works, lets go back inside to the general space that we were at earlier. Go.			
Hand out a topographical map to each group. Allow them a few minutes to look over the map and study it. When you are ready, get the student's attention. Go over the map with the class. Give a brief explanation of the aspects of a topographical map such as contour lines, geographical features, and how to line the map and compass up together. (This is just an introduction. Don't worry about going too far in depth because future lessons will cover the compass and map more thoroughly.)			
Closing/Conclusion: Start out by allowing the students to ask questions. Now to make sure you learned what I wanted you to learn today I am going to ask you questions as a group, I would like for you to demonstrate (point) 1. What are some common components of a compass? 2. What is a declination? 3. Which way does the red arrow point on a compass? 4. What is a topographical map? 5. What are components of a topographical map?			

Orienteering Assessment 4

Name:_____
Date:_____

6. What are some common components of a compass?

7. What is a declination?

8. Which way does the red arrow point on a compass?

9. What is a topographical map?

10. What are components of a topographical map?

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #5

Objectives (Specific, Behavioral, Assessable)

1. By the end of the class students will develop an awareness of the scenery that they will be working with for the remainder of the unit. They will do so by observing and recording pieces of nature. **(NASPE 3 and 5, EALR 3.3 and 4.1)**

Teacher Objectives:

Equipment: (for a class of 30 students)

- Large area with ample space (entire school yard if possible.)

<table>
<tr><td colspan="4">Instant Activity: None</td></tr>
<tr><td colspan="4">Set Induction: Today we are going to explore the outdoors and observe the campus. I know you all walk around here every day but how often do you notice the little things. Do you think about whether or not it should be there naturally or if it was placed there? Should it be there or is it not supposed to be there? These are some things we are going to think about today.</td></tr>
<tr><th>MAF/Instructional Techniques</th><th>Extensions</th><th>Refinements</th><th>Applications</th></tr>
<tr><td>Students can work in groups or alone.

Hand out the attachment one with A-Z written on it.</td><td></td><td></td><td></td></tr>
<tr><td colspan="4">Informing Task: When I say go you will use the hand I have provided and for each letter you will find one or more things that correspond with that letter in nature. Try to find at least one thing for each letter of the alphabet. Be creative, but appropriate. Please stay on the school property. Go.</td></tr>
<tr><td>Teacher should walk around and make sure students are staying on campus. (Maybe alert other staff on that activity taking place.)

Emphasize that the students are to do their own work. If they are caught exchanging ideas, they will get a 0 for the day.</td><td>Next to the object place a “N” if it is a naturally occurrence and an “U” if it is an unnatural occurrence.</td><td></td><td>Try to get three objects for six letters of the alphabet.</td></tr>
<tr><td colspan="4">Assessment/Closure:
Please hand in your handout. What was the most interesting thing you found today? What did you find for the letter K? Did anyone find something they never noticed before?</td></tr>
</table>

Orienteering Assessment for Lesson 5

Name_____ Date_____

A_____

B_____

C_____

D _____

E_____

F_____

G_____

H_____

I_____

J_____

K_____

L_____

M_____

N_____

O_____

P_____

Q_____

R_____

S_____

T_____

U_____

V_____

W_____

X_____

Y_____

Z_____

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #4

Objectives (Specific, Behavioral, Assessable):

1. By the end of the class, the students will know basic traveling directions. **(NASPE 2, EALR 1.1.2)**
2. By the end of the class, the students will be able to demonstrate the use of a compass. **(NASPE 2, EARL 1.1.2)**
   They will be able to identify the following:
   A. Compass Base
   B. Compass needle (and which direction it points)
   C. Compass housing or numbers
   D. Direction of travel arrow

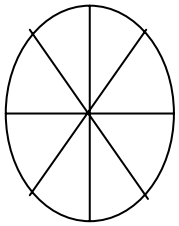
Teacher Objectives:

Equipment: (for a class of 30 students)

- 30 compasses
- 1 demonstration compass
- 6 deflated balloons
- 20 poly spots
- 6 directional papers (attached #2)
- 1 overhead projector
- 1 drum or a pair of rhythm sticks
- 30 closure papers (attached #1)
- 30 pencils

Instant Activity: Scatter poly spots around the activity area. On the drumbeat the children begin **walking** in and around the bases. Have them explore the entire area but they need to avoid the bases. When the drum stops, they move to the nearest base and freeze on the base. They are welcome to share a base. Make sure they don't fight over it. Try to mix in directional terms: North, South, Northwest, etc. Also, mix in different movements: skipping, sprinting, galloping, sliding, etc.			
Set Induction: How many of you have every watched the show Amazing Race? Well, orienteering is kind of like a race, but it's a race to find different markers hidden from you. The only things you get to help you complete the race is a compass and a map. You don't have someone (a host) giving you clues and showing you the way to your next checkpoint.			
M.A.F.	**Extensions**	**Refinements**	**Applications**
Before class: cut out the directional pieces of paper and fold them small enough to fit into the balloon. Then blow the balloons up.			
Informing Task: When I say go, I would like for you to get a compass and sit quietly in self space looking at me. Go.			
Demonstrate the use of a compass using an overhead. How to spin the dial of the compass to get the desired degree, which arrow is the magnetic arrow (the one that floats in the compass), which arrow is the permanent north arrow (the one drawn into the bottom of the compass), the base arrow or arrow you point in the direction you want to go. (on the base of the compass) Go over different terms and meanings of the compass. (N, S, E and W) See above. Read the book *Teaching Orienteering* to help with further clarification if needed.	This is a compass (make sure students are able to see the compass you are using to demonstrate). As I demonstrate the different functions of a compass, I would like for you to mimic what I do on your own compass.	Get a good feel for how a compass works because you will be expected to use one on your own soon.	
	I would like for you to turn the dial		Where now is the permanent

	so it is reading 90 degrees. Notice how the navigational arrow travels with the degree rotation.		north arrow? Is it facing North, South, East or West?
Informing Task: When I say go, I'd like for you to get a compass and pick a spot in the gym to walk to while using your compass. Go.			
Make sure the students walk towards a directional spot in the gym.	Set the compass at a specific bearing and follow your arrow.	Remember to follow your compass needle to get to your spot in the gym; do not just walk there freely.	
Set up the scavenger hunt: spread 6 poly spots around the activity area. Spread the balloons out randomly.			
Split the students up into pairs by eye color. One student gets a balloon, the other student stands by a poly spot.	One person get a balloon, the other person should stand by a poly spot.		
Informing Task: When I say go, I'd like for you to pop your balloon and follow the directions written on the balloon. Make sure that you work as a team and are always with each other. Also, make sure you pick up the pieces of your balloon to throw away. Go.			
Each student uses their own compass.	At the end of the directions, make sure you mark down how many feet you are away from your poly spot if you are not standing on the poly spot itself.	Remember to set your bearings according to your directional paper.	
If time permits, have students exchange directions and start over.			
Have students put equipment away and throw away balloon pieces.			
Closure/ Assessment: Hand out a Closure paper and pencil to each student. Have them answer the following questions: 1. What does the compass base look like? 2. What color(s) is the compass needle? Which color always points north? 3. What to the numbers on the dial refer to? 4. What is the arrow called on the compass base? 5. Fill in the following diagram with the correct directional terms (South, East, West, North, Southeast, Northeast, Southwest, Northwest.)			



Closure Paper #1
Name:_____
Date:_____

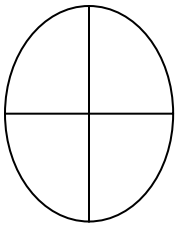
1. What does the compass base look like?

2. What color(s) is the compass needle? Which color always points north?

3. What to the numbers on the dial refer to?

4. What is the arrow called on the compass base?

5. Fill in the following diagram with the correct directional terms (South, East, West, North, Southeast, Northeast, Southwest, Northwest.)



Directional Paper(s) #2

Course 1
120°-10 Steps

240°-10 Steps

0°-10 Steps

Course 2
300°-8 Steps

60°-8 Steps

180°-8 Steps

Course 3
90°-12 Steps

180°-12 Steps

270°-12 Steps

0°-12 Steps

Course 4
90°-6 Steps

180°-8 Steps

330°-10 Steps

Course 5
130°-3 Steps

220°-4 Steps

310°-6 Steps

100°-5 Steps

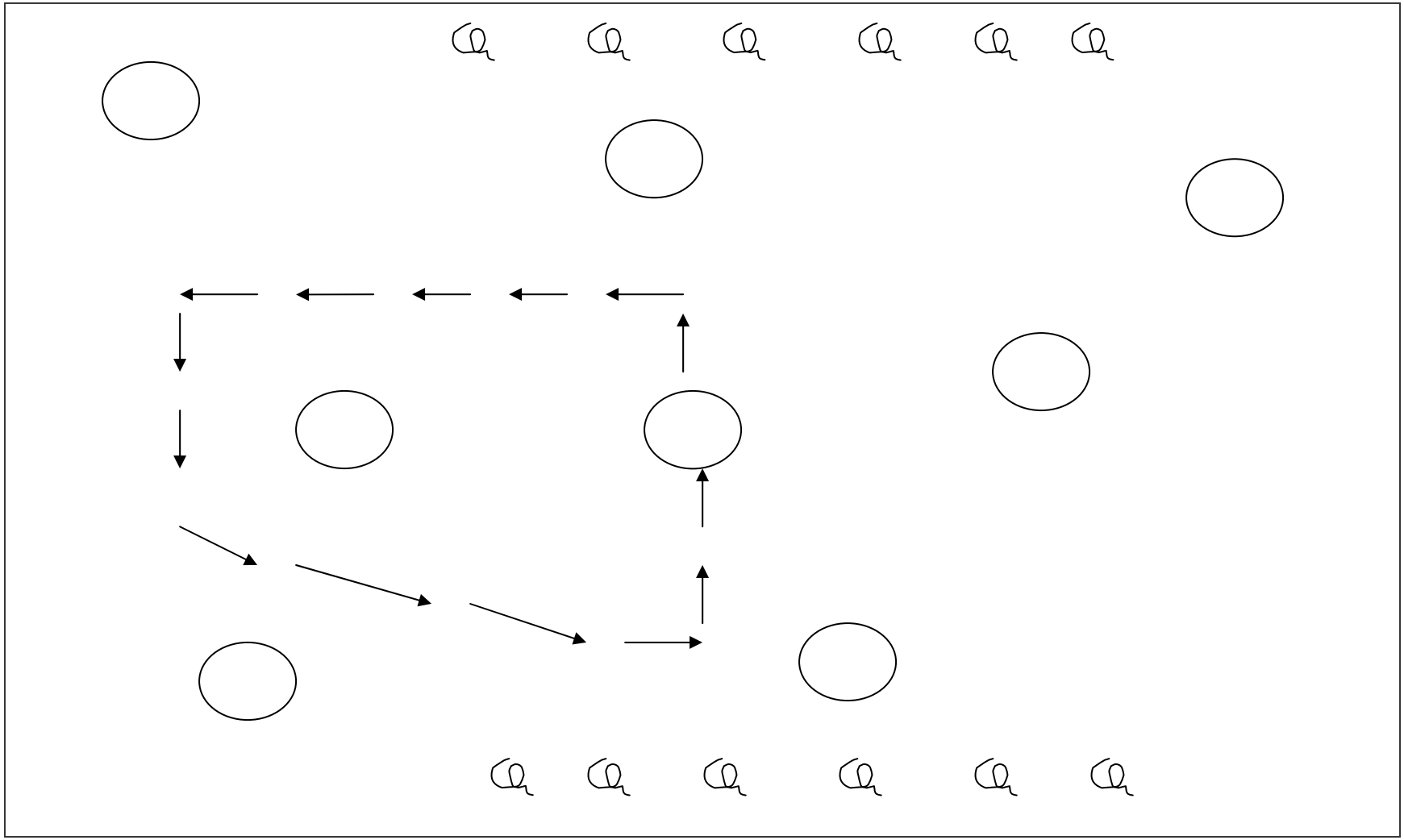
Course 6
110°-6 Steps

200°-8 Steps

290°-12 Steps

80°-10 Steps

Example of what student's course should look like:



Key: Poly Spot

Balloon

Walking Line

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #3

Objectives (Specific, Behavioral, Assessable)
1. By the end of the class students will know the importance of working together to get something done effectively. **(NASPE 5, EALR 3.3.3)**
1. By the end of class students will demonstrate good teamwork stills by successfully completing the team's tasks. **(NASPE5, EALR 3.3.3)**

Teacher Objectives:

Equipment: (for a class of 30 students)
- 4 2x4 boards with 3 pieces of 3 ft. string inserted in each board evenly
- 20 raised poly spots or semi circles
- 10 scarves
- 4 sturdy (non-bendable) plumbing pipes (4ft. long) with cushioning around them (felt, etc.)
- 6-8 folding mats (usually used to do sit-ups, gymnastics, etc.)
- 1 deck of cards

Instant Activity: Line tag. Students will need to find a partner and link arms with that person (elbow to elbow). The teacher then picks one pair of students to be "it." When the teacher begins the game, the students begin to walk/jog in general space, being careful not to knock into one another. If the pair of students who are "it," tag another pair of students (if either person is tagged, it counts), that pair of students link arms with the pair of students who are already it (there should now be a total of 4 people "it") and they continue together in an effort to tag more pairs of students. Stop the game after 3-5 minutes.			
Set Induction: How many of you have ever played a team sport, or worked on a group project? Well today we are going to work on skills that will help for the next time you are working with other people. Who can tell me what it takes to be a good leader? Who can tell me what it takes to be a good follower? How does this help with teamwork? (write down the responses to these questions)			
MAF/Instructional Techniques	**Extensions**	**Refinements**	**Applications**
Before Class: Divide the gym into three playing areas. (either use the lines of the gym or ropes) In one playing area, set the poly spots up going from one side of the playing area to the other (making sure not to interfere with the other playing areas). Each poly spot should be about a foot away from the poly spot before it. (see diagram at the end of this lesson) Set the scarves at one side of the playing area and poly spot line. In the second playing area, place the four 2x4s with strings in them at one end of the playing area. In the third playing area, place the mats next to each other, spread across the span of the playing area for safety. Then place the plumbing pipes at one end of the playing area. The students will need to create a human ladder. Students will be divided into groups of 10. (three groups total)			
You will need to divide students into			

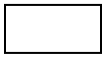
groups of 10 (three groups total). Divide the students into groups of ten by using a deck of cards. Whoever gets a diamond card is on the diamond team, whoever gets a spade card will be on the spade team, etc.			
Informing Task: When I say go, you will get into groups of ten based of the suit of card you have. Hearts will go to the hot lava playing area, spades will go to the snow marsh area and diamonds will go to the human ladder area. In the hot lava game, you will need to get from one side to the other making sure your feet stay on the poly spots and making sure you are holding scarves with the person in front and behind you. If anyone on your team falls off the poly spot or drops their scarf before getting to the other side, your whole team must start over again. For the snow marsh activity, there will be 5 people for two boards. You will need to pull the ropes up to pick the boards up, one side at a time to get across to the other side of the playing area as a team. With the human ladder, you will need to be a little safety conscious; one person will be selected to crawl across the ladder. One person will act as the spotter or supervisor to catch the person crawling across the ladder in case they fall. The rest of the team will make a ladder by moving one pipe in front of the other. You will need to work as a team to keep the ladder going in order to reach the other side of the playing area. Any questions? Go.			
There should be 3 groups of ten people in each playing area. Walk around a monitor to make sure everyone is safe and there is no cheating occurring.	If you get to the end of your activity. Try going back the way you just came.	Remember to communicate with each other. Figure out the best way to get the activity done as a team.	
Once each team has completed their task successfully, stop the class and have them come to group space.		.	
. **Informing Task:** Go job everyone! I'm sure each of those activities were difficult in their own ways. When I say go, I would like for the hearts to go to the snow marsh activity, the spades to go to the human ladder activity and the diamonds to go to the hot lava activity. Are there any questions? Go.			
Walk around a monitor to make sure everyone is safe and there is no cheating occurring. Once each team has completed their task successfully, stop the class and have them come to group space.	If you get to the end of your activity. Try going back the way you just came.	Remember to communicate with each other. Figure out the best way to get the activity done as a team.	
Informing Task: Well done, you seem to be getting the hang of working together as teams. Just to make sure you are fully able to work as teams, when I say go, I would like for the hearts to go to the human ladder activity, the spades to go to the hot lava activity and the diamonds to go to the snow marsh activity. Are there any questions? Go.			
Walk around a monitor to make sure everyone is safe and there is no	If you get to the end of your activity. Try going back the way	Remember to communicate with each other. Figure out the	

cheating occurring. Once each team has completed their task successfully, stop the class and have them come to group space.	you just came.	best way to get the activity done as a team.	
Closure/Assessment: Note: How do the students responses to these questions differ from the beginning of the lesson? • Who can tell me what it takes to be a good leader? • Who can tell me what it takes to be a good follower? • How does this help with teamwork?			

This is a Key for diagram #2

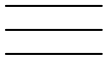
Poly spots:

Mats:

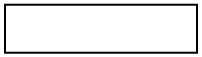


Scarves:

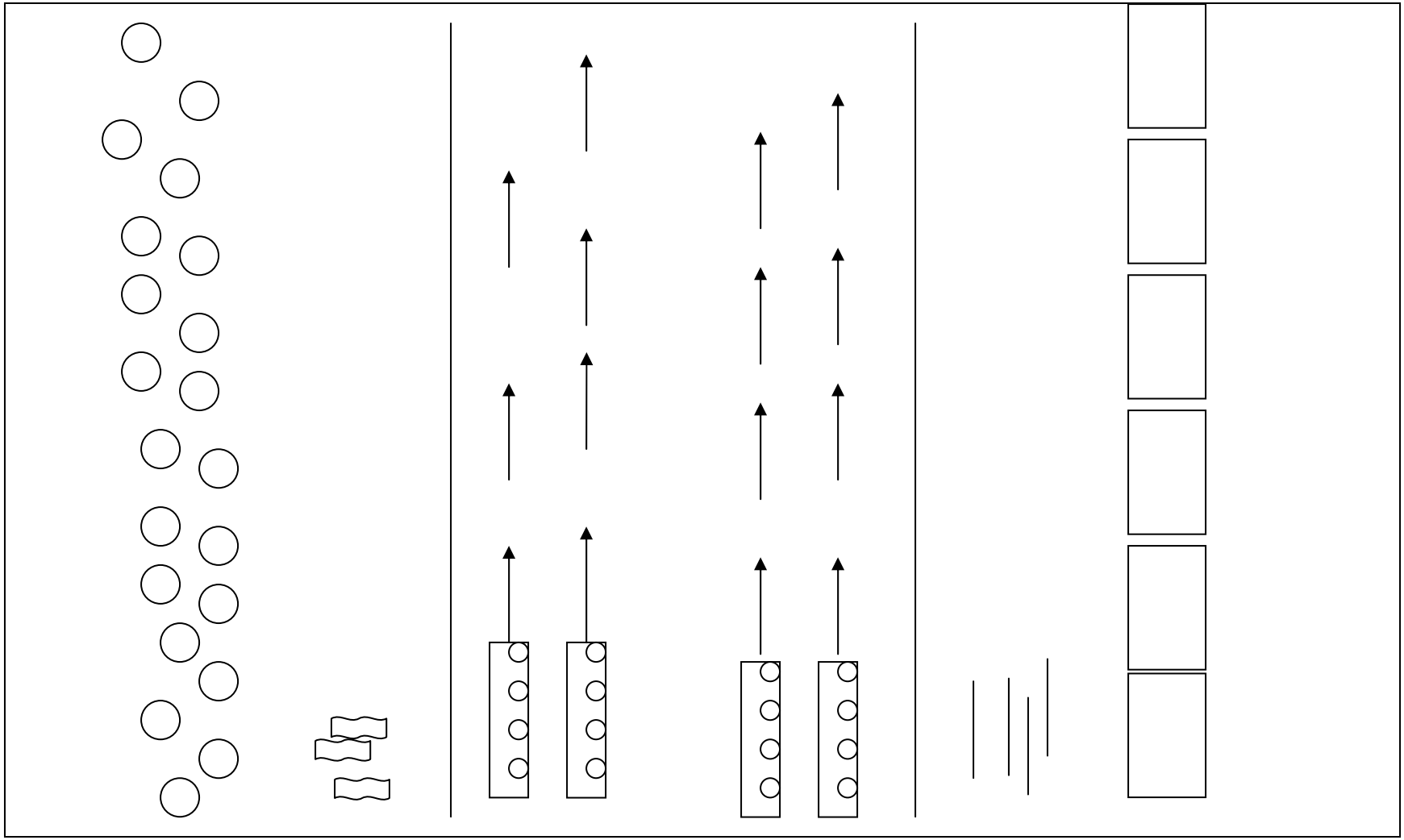
Plumbing pipes:



2x4 boards:



Where ropes should be inserted
On the 2x4 boards:



#2: This diagram is an example of how the general space (gym) should be set up. From left to right is: Hot Lava, Snow Marsh & Human Ladder.

Orienteering Assessment 2

Name:_____
Date:_____

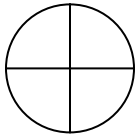
1. What does the compass base look like?

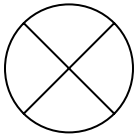
2. What color(s) is the compass needle? Which color always points north?

3. What to the numbers on the dial refer to?

4. What is the arrow called on the compass base?

5. Fill in the following diagram(s) with the correct directional terms (South, East, West, North, Southeast, Northeast, Southwest, Northwest.) Remember to put the correct terms with the correct diagram.





Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #2

Objectives (Specific, Behavioral, Assessable):

1. By the end of the class students will have demonstrated teamwork and trust. **(NASPE 5, EALR 3.3.3)**
2. By the end of the class students will have more knowledge about fitness. **(NASPE 5, EALR 3.3.3)**

Teacher Objectives:

Equipment: (for a class of 30 students)

- 36 dome cones (6 each of 6 different colors)
- 36 index cards
- 6 jump ropes (optional)
- 6 small clipboards
- 6 pencils
- 6 hula hoops
- 6 regular cones
- 3 bean bags
- 3 basketballs
- 3 nerf balls
- 3 flying discs
- 3 soft balls
- 3 volleyballs
- 3 scarves
- 3 soccer balls

Instant Activity: Equipment Fun. You will need to use the entire gym area. Use four of the regular cones for boundary lines, place the four cones in the far cones of the gym. Scatter 3 of the following equipment pieces around the gym: basketballs, nerf balls, jump ropes, hula hoops, beanbags, frisbees, softballs, volleyballs, soccer balls, and scarves. As the students enter the gym ask them to each pick up *one* piece of equipment. After each student has a piece of equipment, instruct them to start playing with the equipment in a creative and safe manner, remind them that they should be close to their self space. (Self-space is space about three feet around each student) After about one to two minutes form groups by asking the students to find another student(s) with the same piece of equipment they are holding. After everyone has found their groups, ask them to create a game or activity using either one piece of equipment or all of their equipment combined. Stop them after another 2-3 minutes.			
Set Induction:			
MAF/Instructional techniques	**Extensions**	**Refinements**	**Applications**
Before class, write the specific tasks on one side of an index card and a specific vocabulary term on the other side of the index card. You will do this for all 36 index cards. (See attached sheet #1) Also before class, scatter the dome cones around general space. Place an index card under each dome cones. Try to make sure the color of the dome cones are spread out. (ex: red and blue are close but not red next to red) Create a “base” for each team by placing a colored hula hoop around a regular cone. (ex: place a blue hula hoop around a regular cone)			
Split the class into six teams. Try to mix the teams evenly with males and females. Let them			

know what color their team represents. Give each team a jump rope, clipboard, piece of paper, and pencil.			
Informing Task: When I say go, I would like for your team to hold onto one jump rope and walk as a team to a dome cone of your teams color. If you're the red team, your team will need to go to a red dome cone. One person from your group will need to bring the clipboard with the paper on it and pencil to each dome cone you go to. Once you get to the dome cone, get the index card from underneath the cone, read the task on the card, perform that task, write down the task on the tally sheet and take the card back to your base. Go.			
Make sure each team member is holding on to the jump rope when moving from the base to a dome cone. Also, make sure each team member is performing the task on the task card.	After you've brought one task card back to the base, go as a team to the next dome cone.	Remember that you will need to go back to the base with each task card. You should never go from one dome cone to the next dome cone.	
		Perform each task to the best of your ability.	See if you can extend the task on your task card by doing two or more of whatever is on your present task card. Count out loud as a team.
If a task is missing (a team does not have all six clues/tasks) the team must go out (holding the jump rope still) and figure out which one is missing and perform the task as a group before they can record it on their tally sheet.	After your team has collected all of your task cards, figure out what sport is represented by the vocabulary words on the other side of the task cards. Record your answer on the tally sheet.		

	Yell out your team color when you have your vocabulary clues figured out so I can come over to your team and tell you if your are correct or not.		
Informing Task: When I say go, I would like for each group to come up with five different tasks from the tasks you've already completed today and write the new tasks down on the back of your tally sheet. When you are done writing your tasks, as a group sit quietly with your hands raised. Go.			
Make sure each group has a new task card sheet.	Before you switch tally sheets/ new task cards, make sure all your group members names are on your original sheet. Switch tally sheets/ new task cards with the group to your right.		
	As a group begin the new task cards.		
Closure/ Assessment: Collect the student's tally cards/ new task cards. This will be graded for thought, creativity and performance.			

Task/ Vocabulary Cards #1

Red Group:	Front side of the card:	Back side of the card:
Index card (1)	30	Dive
Index card (2)	25	Smash
Index card (3)	20	Volley
Index card (4)	15	Spike
Index card (5)	10	Set
Index card (6)	5	Kill

Blue Group:	Front side of the card:	Back side of the card:
Index card (1)	5	Dunk
Index card (2)	10	Foul out
Index card (3)	15	Dribble
Index card (4)	20	Zone defense
Index card (5)	25	Forward
Index card (6)	30	Guard

Green Group:	Front side of the card:	Back side of the card:
Index card (1)	20	Pass
Index card (2)	15	Run
Index card (3)	25	Tackle
Index card (4)	10	Strength
Index card (5)	30	Agility
Index card (6)	5	Yards

Yellow Group:	Front side of the card:	Back side of the card:
Index card (1)	10	Glove
Index card (2)	30	9 players
Index card (3)	5	Pinch hit
Index card (4)	25	Pop-up
Index card (5)	15	Home run
Index card (6)	20	Strike out

Orange Group:	Front side of the card:	Back side of the card:
Index card (1)	25	Wiffle ball
Index card (2)	10	Short net
Index card (3)	20	Wooden paddle
Index card (4)	5	Smash
Index card (5)	15	Volley
Index card (6)	30	Single= long & skinny

Purple Group:	Front side of the card:	Back side of the card:
Index card (1)	15	Smash
Index card (2)	5	Tall net
Index card (3)	25	Drive
Index card (4)	10	Hair pin net shot
Index card (5)	30	Shuttle cock
Index card (6)	20	Long handled racquet

Answer Sheet #2

Red- Volleyball

Blue- Basketball

Green- Football

Yellow- Baseball/ Softball

Orange- Pickle Ball

Purple- Badminton

Physical Education Teacher Education Program
Central Washington University
Orienteering Lesson #1

Objectives (Specific, Behavioral, Assessable):
1. By the end of the class students will have demonstrated teamwork and trust. **(NASPE 5, EALR 3.3.3)**

Teacher Objectives:

Equipment: (for a class of 30 students)
- 15 bandanas (ties) for three legged race
- 30 papers
- 15 bandanas/ blindfolds to cover eyes
- 30 pencils
- 34 cones to set boundaries
- Music: “Getting Jiggy Wit It” by Will Smith from the CD Big Willie Style(for the Instant activity)

Instant Activity: Crazy Cones. Music can be used as the protocol and at least as many cones as there are students are needed. Cones are scattered in a large activity area. Half of them are standing and the other half are laying down. The class will count off (one's or two's) so the class will be split in half. Half the group is trying to knock down the cones and the other half put them back up. Switch roles after about 30 seconds. Count the number of cones that were left standing or knocked down before you begin the instant activity again to help motivate the students to work hard. Different body parts can also be used to knock down the cones like feet, heads, elbows, and knees per teacher's request.			
Set Induction: Orienteering originated in Scandinavia, it was primarily used for military navigation. Most people think orienteering is only about speed and getting done the quickest but really it is about using your brain. Orienteering is a race in which competitors usually use a map and compass to find their way through unfamiliar territory. How many of you have played on a team of some sort before? To be successful at any team sport you have to have work together for a common goal. This is also true with orienteering you must work together to find a desired destination.			
MAF/Instructional techniques	**Extensions**	**Refinements**	**Applications**
Informing Task: When I say go, find somebody with the same birthday month as you. If you can't find somebody with the same month find somebody close. I will know you are ready when you are sitting back to back and your eyes are on me. Go.			
Make sure your students are sitting back to back before having them begin the task.	I would like for you to lock arms (elbow to elbow) and try to stand up.	This will take a lot of patience. You will need to place your feet firmly on the ground, press your back against your partners back and try to slowly stand up.	
If there is confusion then the teacher should pick a student to demonstrate the activity with.	When you have successfully stood up with your arms still locked to your partners, try groups of four.	Try to trust your partner. You should be helping each other to a common accomplish a goal of standing up with your arms still locked. Make sure your partner is not in pain or falling down at all times.	See how many students can work together to stand up at the same time with their backs together and their arms locked.
Most groups will not get more than four people successfully performing the partner lock at once.	You can keep increasing group size by two as you are successful.		
Informing Task: When I say go, I would like for all of you to stand lined up on the right sideline running along the wide part of the gym shoulder to shoulder with your partner and wait for instructions. Go.			

Wheelbarrow race. When the teacher says “go” then they are to “wheelbarrow” to the opposite sideline. Begin the students with the protocol “go” when the students look ready.	You will now be doing the “wheelbarrow” race. In case any of you have not performed in a wheelbarrow race, the first partner is to get down on his/her belly and the other partner grabs the partner on the ground around the ankles. The second partner gently picks up the first partners legs and the first partner will need to walk on his/her hands across the gym to the other sideline. You will begin the race when I say go and you will stop once you’ve reached the other side of the gym. Have them go in a zigzag pattern.	Try to trust your partner. You should be helping each other to a common accomplish a goal of standing up with your arms still locked. Make sure your partner is not in pain or falling down at all times. Remember this is not a race against other teams; this is a race to see how you work and communicate with your partner to get across the gym in a timely fashion.	
Once they get to the other side have them switch partners and come back.	Good job! Now I would like for you to switch roles. The first partner is now the wheelbarrow pusher and the second partner is the wheelbarrow. When I say go, you are going to go back across the gym back to the starting sideline.	Try to trust your partner. You should be helping each other to a common accomplish a goal of standing up with your arms still locked. Make sure your partner is not in pain or falling down at all times.	
Stop students after they have come back have them sit quietly for more instruction.	When you and your partner reach the sideline, please sit quietly and wait for more instruction.		
Informing Task: When I say go, I would like for you to find a new partner who is about the same size (weight) as you. Once you and your partner are standing next to each other get a tie. Tie your inside legs together with a bandana and wait quietly for more instruction. Go.			
Tell your students when to begin. Make sure their legs stay tied together.	First, I would like for you and your partner to try to jog across the gym to the other sideline when I tell you to go. Once you	Same refinements as listed above.	

	are at the other sideline, stop and wait for more instructions.		
Tell your students when to begin.	Now I would like you and your partner to try to skip back to the other sideline. You may begin when I say go.	Remember your inner legs need to act as one. Your inner legs should be tightly secured.	
Informing Task: When I say go, I would like for each group to get one blindfold. You will then need to decide which partner is going to be blindfolded and place a blindfold on that partner. The partner without the blindfold needs to lead the blindfolded partner around the perimeter of the activity area. Go.			
Make sure to explain that safety is an important factor when performing this task. There should be no pain involved. Have the first partner go for 3-5 minutes. After the allotted time, switch partners and go for another 3-5 minutes.	You can lead your partner around cones, over objects, down/ up stairs, and around corners. Just make sure to give specific directional cues so your blindfolded partner is safe and able to perform the each task at hand.	The blindfolded partner must listen to the non-blindfolded partner directions. The object is to gain trust with each other.	Count how many objects your blindfolded partner is able to dodge successfully.
Closure/Assessment : Have the students gather around with a pencil and paper. They are to write down in no more than 3 sentences the importance of teamwork and trust. Give the students two-five minutes to write down their answers. When they are all finished go around the class and have each student read what they wrote down. Then have the students turn in their papers for points.			

Orienteering Assessment 1

Name:_____ **Date:**_____

In the space provided below, please describe the importance of teamwork and trust. (Hint: Why is it important for you to be able to depend on your partner or teammate?)

Task Cards

Task cards are designed to help the students understand what activity (task) they are expected to be doing. Task cards generally have refinements or cues on them to help the students remember exactly how they are to perform the task at hand. Each lesson will vary with the amount of task cards that can be used. Task cards can either be posted on the wall of a gym or classroom where students can see them or task cards can be put around the gym or activity area in sequential order to the skill which should be performed.
**Suggestion: It is a good idea to laminate your task cards so you can use them year after year. Also, the bigger and more creative a task card is, the more attention it will attract.

Task Card Index:

Task Card:	**Lesson:**
Back to the Beginning	Four
Getting Familiar With the Compass	Six
Measuring Stride Length	Fourteen
Eight Steps to Setting Up a Tent	Sixteen
How to Use a Compass to Orient a Map	Seventeen
How Important is a Compass?	Seventeen
Taking a Bearing	Seventeen
Pathways of Color	Nineteen
Alphabet Hunt	Twenty
Here and There	Twenty-two

Back to the Beginning

Course 1
120°-10 Steps

240°-10 Steps

0°-10 Steps

Course 2
300°-8 Steps

60°-8 Steps

180°-8 Steps

Course 3
90°-12 Steps

180°-12 Steps

270°-12 Steps

0°-12 Steps

Course 4
90°-6 Steps

180°-8 Steps

330°-10 Steps

Course 5
130°-3 Steps

220°-4 Steps

310°-6 Steps

100°-5 Steps

Course 6
110°-6 Steps

200°-8 Steps

290°-12 Steps

80°-10 Steps

Getting Familiar With the Compass

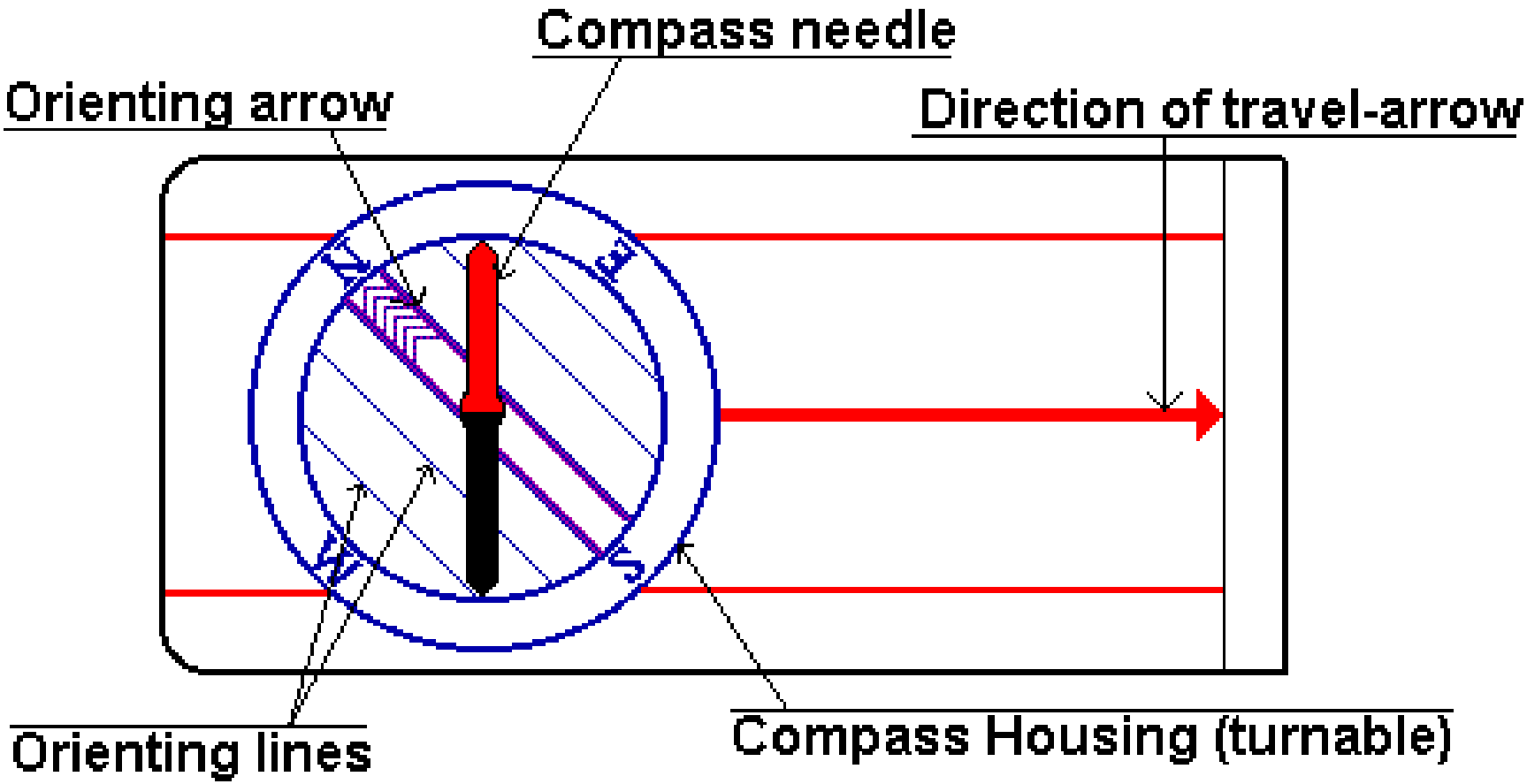
Compass needle: The red and black needle that spins around. The red side of the
needle always points towards the magnetic north.

Compass housing: Is labeled N, S, E & W. Has degrees 0-360.

Direction of travel-arrow: Point this arrow to where you'd like to go.

Orienteering lines: When using a map, these lines should be pointing the same
direction as the north lines on the map you're working with.

Orienteering arrow: Just make sure this is always pointing north on the map, it runs
parallel with the orienteering lines.


Compass needle
Orienting arrow
Direction of travel-arrow
N
E
W
S
Orienting lines
Compass Housing (turnable)

Measuring Stride Length

Step One: Lay down your 10 yd piece of crate paper.
Step Two: Take off your shoes and socks.
Step Three: Place your feet in paint tub.
Step Four: Walk across paper as normally as possible.
Step Five: Partner then measures between each footprint to find your stride length.
Step Six: Now switch with your partner.

Eight Steps to Setting up a Tent

Step One: **Get the tent out of the bag and lay the tent out flat with all of the corners of the tent stretched out.**

Step Two: **Put the poles together, so you know how long each pole is.**

Step Three: **Figure out where the poles go in relation to their "sleeves" on the outside of the tent.**

Step Four: **Put the poles in their correct places or "sleeves." Be**

sure to push the pole through, not pull.

<u>Step Five:</u> Have one person stand at each corner of the tent and one person pull up the middle pole (in the middle of the tent). Place the long part of the hook at each corner into the end of the pole. Pull the sleeves along as you bend the pole. 

<u>Step Six:</u> Hammer the stakes into the ground. Do so at a 45 degree angle. Hammer until the hook at the end of the stake is holding the circle down at each corner of the tent.

<u>Step Seven:</u> Put the rain tarp on. The shortest pole should go on

the rain tarp. There are two pockets that the ends of the pole tuck into. Then slide the tarp over until it is equal on top of the tent. Snap it into place.

<u>Step Eight</u>: Take down. Do so by reversing all the steps and the directions. Take off the rain tarp. Pull out the stakes with the back of the hammer. Undo the poles and collapse the tent. Push the poles out of the sleeves. Fold the tent in half twice and role up tightly. Put all the equipment back into the bag and zip it.

How to use a compass to orient the map…

◇ Hold your map horizontally.

◇ Place the compass flat on the map.

◇ Rotate the map until the north lines on the map are aligned with the compass needle.

This should hopefully make the map easier to read in comparison to the compass.

How Important is a Compass?

☼Compasses are useful for taking bearings and orienting a map so it is aligned with the terrain- but it is possible in most cases to complete a course without using a compass.

☼The compass is the only legal navigational aid that can be used in an orienteering competition.

☼The most important component or tool to use when orienteering is just using your brain.

Taking a bearing:

Every direction can be taken as an angle with respect to north. This is called an **azimuth** and bearing can be expressed by as number of degrees. The following are directions to set a bearing on a base plate compass:

☼Place the compass on the map so the direction of travel arrow is lined up with the direction you would like to go.

☼Turn the compass base until the north arrow is parallel to the northern orienting lines.

☼Take the compass off the map and point it so the direction of travel points directly in front of you.

☼Rotate your body until the magnetic needle in the compass is aligned with the arrow of the compass base.

☼Steer clear of any obstructions that may be in your path of travel by looking ahead and using obstructions as “check points” along the way to your final destination.

Pathways of Color

Group 1's course (Blue Ribbon)

Start bearing: 90 degrees (walk until you see the next ribbon)

Next ribbon should say: 28 degrees (walk until you see the next ribbon)

Next ribbon should say: 320 degrees (walk until you see the next ribbon)

Next ribbon should say: 0 degrees (walk until you see the last ribbon)

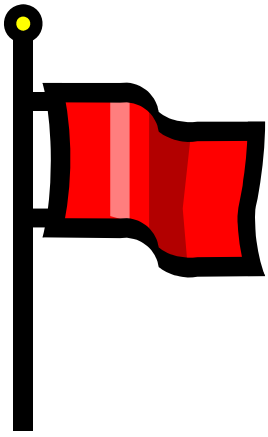
Group 2's Course (Red Ribbon)

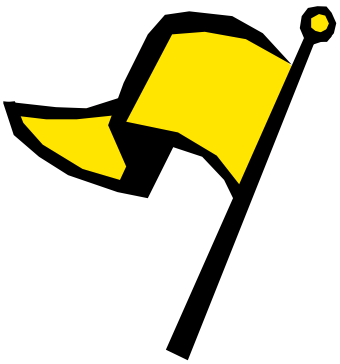
Start bearing: 300 degrees (walk until you see the next ribbon)

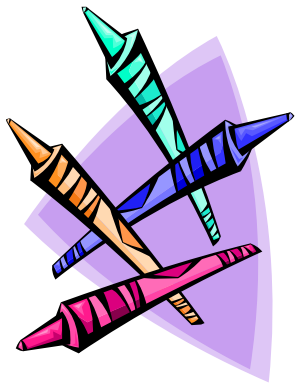
Next ribbon should say: 40 degrees (walk until you see the next ribbon)

Next ribbon should say: 180 degrees (walk until you see the next ribbon)

Next ribbon should say: 115 degrees (walk until you see the last ribbon)







Group 3's Course (Green Ribbon)

Start bearing: 230 degrees (walk until you see the next ribbon)

Next ribbon should say: 60 degrees (walk until you see the next ribbon)

Next ribbon should say: 340 degrees (walk until you see the next ribbon)

Next ribbon should say: 10 degrees (walk until you see the last ribbon)

Group 4's Course (Purple Ribbon)

Start bearing: 270 degrees (walk until you see the next ribbon)

Next ribbon should say: 0 degrees (walk until you see the next ribbon)

Next ribbon should say: 200 degrees (walk until you see the next ribbon)

Next ribbon should say: 300 degrees (walk until you see the last ribbon)

Group 5's Course (Black Ribbon)

Start bearing: 180 degrees (walk until you see the next ribbon)

Next ribbon should say: 50 degrees (walk until you see the next ribbon)

Next ribbon should say: 310 degrees (walk until you see the next ribbon)

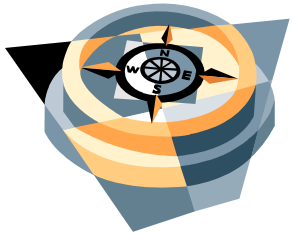
Next ribbon should say: 140 degrees (walk until you see the last ribbon)

Alphabet Hunt

Stakes:	Point Value:
a	1 point
b	2 points
c	3 points
d	4 points
e	5 points
f	6 points
g	7 points
h	8 points
i	9 points
j	10 points
k	11 points
l	12 points
m	13 points
n	14 points
o	15 points
p	16 points
q	17 points
r	18 points
s	19 points
t	20 points
u	21 points
v	22 points
w	23 points
x	24 points
y	25 points
z	26 points

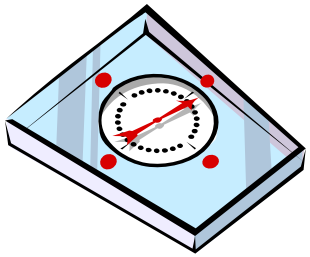
Stakes:	Point Value:
A	27 points
B	28 points
C	29 points
D	30 points
E	31 points
F	32 points
G	33 points
H	34 points
I	35 points
J	36 points
K	37 points
L	38 points
M	39 points
N	40 points
O	41 points
P	42 points
Q	43 points
R	44 points
S	45 points
T	46 points
U	47 points
V	48 points
W	49 points
X	50 points
Y	51 points
Z	52 points

Here and There



Example Course Card:

Start at Building			
1-2	Spring	294`	650m
2-3	Back Stop	42`	350m
3-4	Outhouse	4`	300m
4-5	Fir Tree	267`	625m
5-6	Track	212`	230m
6-7	Tennis Court	178`	600m
7-8	Water Tower	124`	350m
8-9 	Portable 10	90`	350m



Skill Charts

Skill charts are used to give the student or learner an example of what the skill they are trying perform. Skill charts can be posted on the gym or classroom walls or laid down at different stations where the skill is to be performed. Students can greatly benefit from looking at the different stages of a skill while practicing the skill themselves. It is a good idea to laminate any skill charts being used so they can be used year after year.

STEP ONE: LAYING IT ALL OUT

		
This is how the tent should look at the beginning and at the end of putting up a tent. All pieces are neatly tucked inside the bag.	The tent is laid out flat with all four corners stretched out.	This is the rain flap stretched out flat.

STEP TWO: PUTTING THE POLES TOGETHER

When you first get the poles they will be folded. You will need to unfold the poles and connect each end in order to make a fully extended pole. Some poles may be shorter than other poles. Just make sure you put all poles together during this step.

STEP THREE: FINDING WHERE THE POLES GO

Find the sleeves that the poles will go into, but do not slide the poles in yet. Lay the long poles diagonal so they cross in the middle of the tent. Lay the shorter poles parallel so they lay on the sides. There will be one extra pole for the rain tarp, which will lie straight down

STEP FOUR: PUTTING THE POLES IN THE CORRECT PLACES

			
Find the correct sleeve and begin pushing the pole through it.	Be sure that you are pushing and not pulling the pole through the correct sleeve.	This shows the short parallel poles along the sides (above the windows) the diagonal poles are still lying flat.	This shows the diagonal poles at the top of the tent. These poles should be the longest two poles intersecting.

STEP FIVE: PUTTING A STUDENT AT EACH CORNER AND PUTTING THE POLES UP

			
Place the hook into the end of the pole at each corner to secure the pole placement into the tent.	Be sure you are sliding the sleeves along as you are bending the poles into place with the hooks.	This is what the tent should look like standing up-right without the rain tarp on.	There are more plastic hooks on the sides of the tent where the pole should be, make sure to hook them onto both poles. This keeps the tent from flapping around.

STEP SIX: PUTTING THE STAKES IN

		
This is what the stakes and the hammer should look like.	Hammering the stake into the ground through the circle (one at each corner), the stake should be hammered in at a 45 degree angle.	The hook at the top of the stake should be holding the circle at each corner of the tent to the ground securely.

STEP SEVEN: PUTTING THE RAIN TARP ON

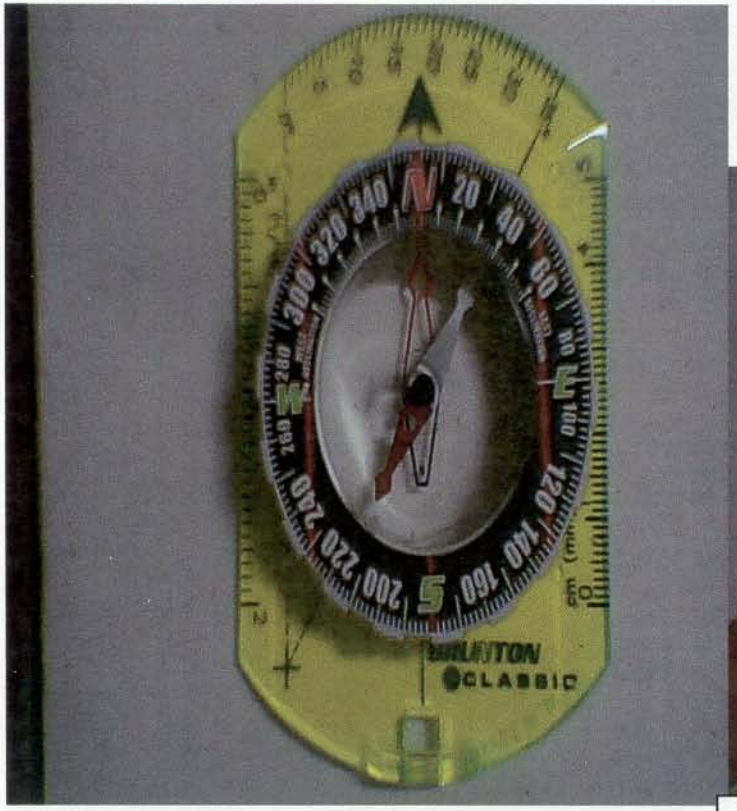
			
The extra pole belongs to the rain tarp. The pole is to be placed directly down the middle and the ends need to be put in the pockets at each side.	One person get on each side of the rain tarp and slide the rain tarp over to the top of the tent. Make sure the middle of the rain tarp in aligned with the middle of the tent.	Snap the tarp into place at all four corners.	This is the finished product, rain tarp and all!

STEP EIGHT: TAKING DOWN THE TENT AND PUTTING IT AWAY

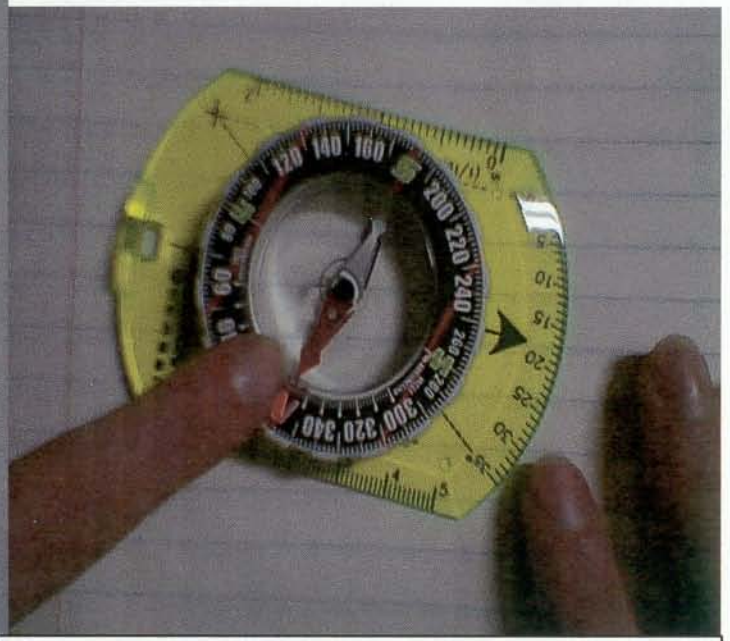
			
Pull the poles apart at the ends.	Lay the rain tarp flat, fold in half twice and roll it.	Do the same for the tent, make sure your roll is very tight so all the air is pushed out.	This is an example of how tightly rolled your tent should be.


Everything should be able to fit neatly in the bag, and the bag should be able to zip shut.

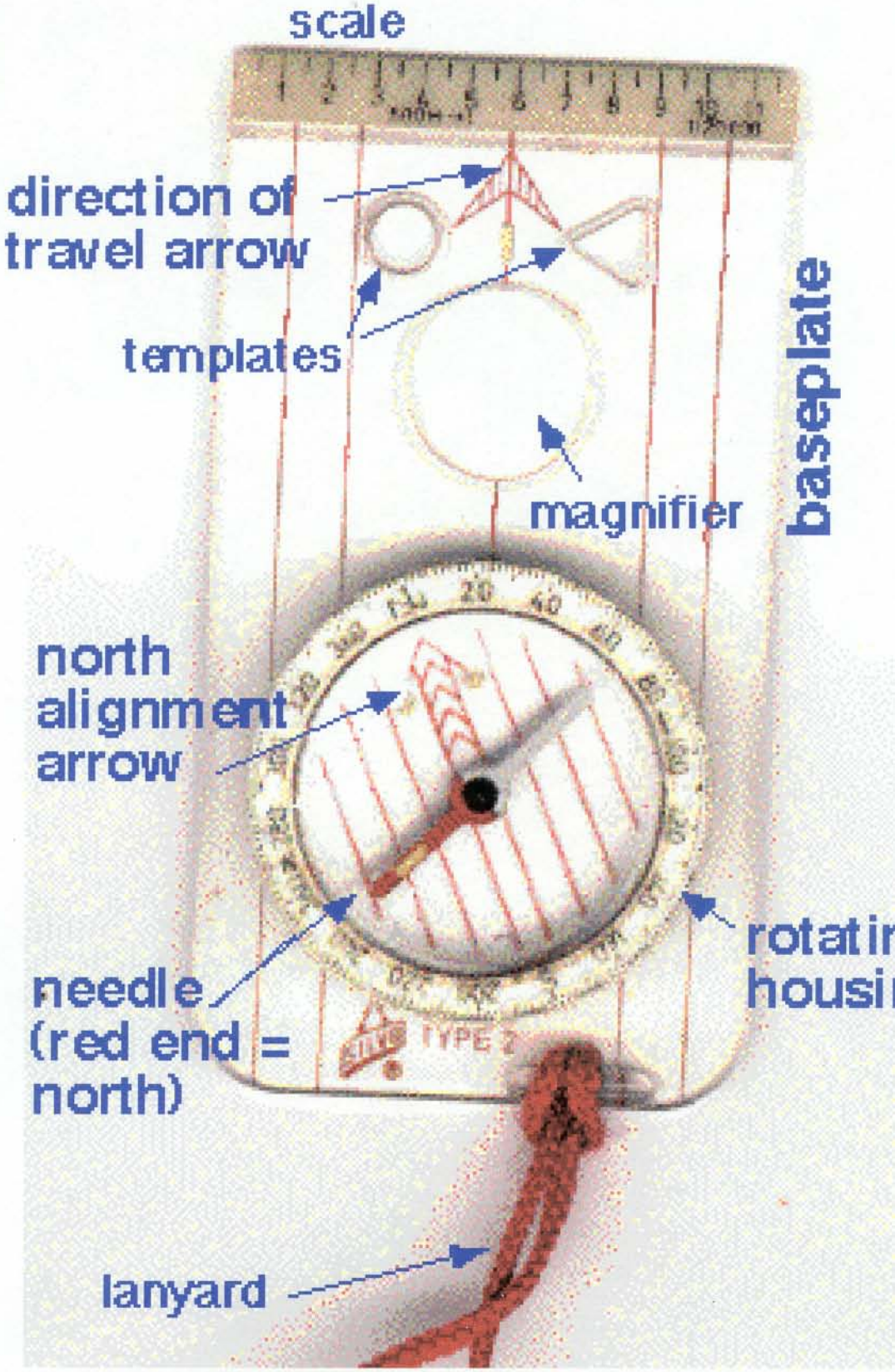
How to Set a Bearing…



This is what a compass looks like lying on a flat surface. Notice how the compass needle is not aligned with the orienting arrow. Therefore, this is an example of what a compass looks like with no set bearing.



Now, the compass bearing is set to 250 degrees. Why? Notice the degree marking on the housing dial which is inline with the direction of travel arrow. The compass needle is now aligned with the orienting arrow. In other words, this gives us the direction to travel.


scale
direction of travel arrow
templates
magnifier
baseplate
north alignment arrow
needle (red end = north)
lanyard

Assessments

Assessments can be both formal and informal and should be based on state EALR's and NASPE standards. Formal assessments are usually hand written quizzes, tests or worksheets. Informal assessments are usually skill based. It is a good idea to make time for assessments as often as possible. The more feedback your students get, the better their skill performance. Suggestions as to when the assessments should be taken can be found on the block plan. Assessments can give you, the teacher, a good feel as to how to challenge your students' needs. Assessments also prove that learning is actually occurring in your classroom. Prove you are a successful teacher by implementing assessments as frequently as possible!

In this section, each assessment will be followed by an answer sheet. Also, at the end of the section is an assessment sheet and example excel grading sheet to be used. The assessment sheet has a broad overview of the assessments given in each lesson.

UNIT: Orienteering **YOUR NAMES: Sara Hert & Breanne Schwabe**

Directions
Modify table as needed to fit the number of days in the unit and any spacing. Please bring examples of some of these assessments to share in class. I have provided a couple of examples showing both informal and formal assessments.

Day	Lesson Theme	Informal Assessment	Standards	Formal Assessment	Standards
1	Teamwork			Paper describing teamwork and trust: must be turned in.	NASPE: 5 EALR: 3.3
2	Teamwork				
3	Teamwork				
4	Cardinal Directions			Complete handout and 5 question quiz.	NASPE: 2 EALR: 1.2
5	Scenery Awareness			Handout in which students will need to demonstrate knowledge of scenery.	NASPE: 5 EALR: 3.1, 3.2, 4.1
6	Orienteering Tools	Group discussion about compass cues.	NASPE: 2 EALR: 1.1		
7	Maps			Worksheet to be done with use of computer. Students will demonstrate use of topographical maps.	NASPE: 2 EALR: 1.1
8	Maps			Worksheet/homework to be completed by students. Students should have a firm grasp on map features.	NASPE: 2 EALR: 1.1

9	School grounds	Group Discussion on how to measure school grounds with accuracy.	NASPE: 2 EALR: 1.1, 1.2		
10	School grounds	Group Discussion on how to measure school grounds with accuracy. Students will need to answer questions based on knowledge gained in the lesson.	NASPE: 2 EALR: 1.1, 1.2		
11	Map construction			Students will be expected to have their maps of the school at least half way finished.	NASPE: 2 EALR: 1.1, 1.2
12	Map construction			Students will be expected to have their maps completely finished and perfected. Maps should be turned in.	NASPE: 5 EALR: 1.2
13	Contour lines			A quiz will be completed on Contour lines, along with an in class worksheet.	NASPE: 2 EALR: 1.2
14	Travel time/ Stride Length			Students should write a brief explanation of the importance of knowing stride length.	NASPE: 2, 5 EALR: 1.2
15	Travel time/ Stride Length			Students will write down the calculations	NASPE: 5, 6 EALR: 3.1, 3.3

				of stride length.	
16	Campground set-up			Quiz will be given on tent steps.	NASPE: 2, 5 EALR: 2.3, 3.1, 3.3
17	Compass Introduction	Group discussion. Questions will be asked based on lesson topic. Students will need to demonstrate comprehension.	NASPE: 2 EALR: 2.3		
18	Compass Course			Students will need to complete a handout on back azimuths.	NASPE: 2, 3 EALR: 2.2
19	Line Orienteering	Students will be assessed based on completion of navigational course.	NASPE: 2 EALR: 2.3		
20	Compass Course			Students will need to complete a handout based on knowledge of compass course.	NASPE: 2 EALR: 2.3
21	Compass/Map worksheet			Students will grade each others compass course based on a rubric.	NASPE: 2, 5, 6 EALR: 1.1, 2.3, 3.3
22	Compass/Map worksheet	Students will be assessed based on their signature at each check point.	NASPE: 2, 5, 6 EALR: 1.2, 2.3, 3.3		
23	Score orienteering	Group discussion based on the point levels obtained in	NASPE: 2, 6 EALR: 1.2, 2.3, 3.3		

		class.			
24	Students make a compass course			Students will be making their own compass course and turning it in.	NASPE: 2 EALR: 2.3
25	Complete another students compass course	Group discussion on how well the courses were developed by peers: what was good, & what could have been improved.	NASPE: 2, 3, 5, 6 EARL: 1.2, 2.3, 3.3		
26	Labyrinth orienteering			Handout should be completed and turned in. Students will need to demonstrate knowledge of compass and where placement of self was in comparison to maze.	NASPE: 2, 5, 6 EALR: 1.2, 2.3, 3.3
27	Mini map races	Group discussion on variety of orienteering practices. Students will demonstrate knowledge of different types of orienteering.	NASPE: 2, 5, 6 EALR: 1.2, 2.3, 3.3		
28	Mini map races	Group discussion on variety of orienteering practices. Students will demonstrate knowledge of different types of orienteering. Also, students will	NASPE: 2, 5, 6 EALR: 1.2, 2.3, 3.3		

		state different strategies to be used.			
29	Map test: written			Final test- students will have class period to demonstrate written knowledge of orienteering.	NASPE: 2 EALR: 2.3
30	Compass course: In the field			Final test- students will have class period to demonstrate physical abilities in orienteering.	NASPE: 2, 5, 6 EALR: 1.2, 2.3, 3.3

Orienteering Assessment 1

Name:_____ **Date:**_____

In the space provided below, please describe the importance of teamwork and trust. (Hint: Why is it important for you to be able to depend on your partner or teammate?)

Orienteering Assessment 1
Assessment (Answer Sheet)

Name:_____ Date:_____

In the space provided below, please describe the importance of teamwork and trust. (Hint: Why is it important for you to be able to depend on your partner or teammate?)

Teamwork and trust are important when working in groups. It requires the common effort by all team members to achieve a common goal. Accomplishing a goal as a group is a lot easier when all members of the group are able to rely on each other.

Orienteering Assessment 2

Name:_____
Date:_____

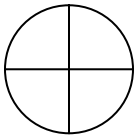
1. What does the compass base look like?

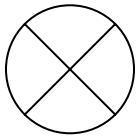
2. What color(s) is the compass needle? Which color always points north?

3. What to the numbers on the dial refer to?

4. What is the arrow called on the compass base?

5. Fill in the following diagram(s) with the correct directional terms (South, East, West, North, Southeast, Northeast, Southwest, Northwest.) Remember to put the correct terms with the correct diagram.





Orienteering Assessment 2
Assessment (Answer Sheet)

Name:_____
Date:_____

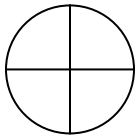
1. What does the compass base look like?
The compass base is square with a direction of travel arrow at one end of the base. Most times the compass base is clear.

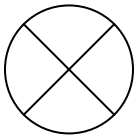
2. What color(s) is the compass needle? Which color always points north?
Usually, the compass needle is half red and half white. The white part of the needle is the part that points towards the magnetic north.

3. What do the numbers on the dial refer to?
The numbers on the dial refer to degrees, they are found on the housing dial.

4. What is the arrow called on the compass base?
The arrow on the compass base is called the direction of travel arrow. This is the arrow a person follows to get to the next check point.

5. Fill in the following diagram(s) with the correct directional terms (South, East, West, North, Southeast, Northeast, Southwest, Northwest.) Remember to put the correct term with the correct diagram.





Orienteering Assessment 3

Name_____ Date_____

A_____

B_____

C_____

D _____

E_____

F_____

G_____

H_____

I_____

J_____

K_____

L_____

M_____

N_____

O_____

P_____

Q_____

R_____

S_____

T_____

U_____

V_____

W_____

X_____

Y_____

Z_____

Orienteering Assessment 3
(Example Answer Sheet)

Name_____ Date_____

A_apple, acorn, and air._____

B_bark, bike and bush_____

C_car, candy wrapper and children_____

D _dirt, dumpster and ditch_____

E_____

F_____

G_____

H_____

I_____

J_____

K_____

L_____

M_____

N_____

O_____

P_____

Q_____

R_____

S_____

T_____

U_____

V_____

W_____

X_____

Y_____

Z_____

Orienteering Assessment 4

Name:_____
Date:_____

1. What are some common components of a compass?

2. What is a declination?

3. Which way does the red arrow point on a compass?

4. What is a topographical map?

5. What are components of a topographical map?

Orienteering Assessment 4
Assessment (Answer Sheet)

Name:_____
Date:_____

6. What are some common components of a compass?
Some common components of a compass include: the base, housing dial, needle, orienting arrow, orienting lines, degrees and direction of travel arrow.

7. What is a declination?
A declination is a slope or bend, a deviation from the normal path.

8. Which way does the red arrow point on a compass?
The red arrow on a compass usually points north.

9. What is a topographical map?
A topographical map is a map which gives descriptive detail about an area.

10. What are components of a topographical map?
The key components of a topographical map are: the key, contour lines, climate conditions, and slopes/valleys.

Worksheet/ Assessment 5

Name:_____
Date:_____

1. Please list the website of the map you chose to answer the questions to this worksheet.

2. Please draw a description of the following map terms:
    A. Contour

    B. Form line

    C. Depression

    D. Steep Bank

    E. Pond

    F. Building

G. Impassable cliff

3. Describe how vegetation is marked in a map symbol key.

4. Describe the difference between a primary highway, secondary highway and light duty road. What do you think these three terms mean in reference to the roads you take everyday? What type of road do you drive on most often?

Worksheet/ Assessment 5
Assessment (Answer Sheet)

Name:_____
Date:_____

5. Please list the website of the map you chose to answer the questions to this worksheet.

www.topozone.com

6. Please draw a description of the following map terms:
    A. Contour

    Answers from here down will vary based on these website selected by the student.

    B. Form line

    C. Depression

    D. Steep Bank

    E. Pond

    F. Building

G. Impassable cliff

7. Describe how vegetation is marked in a map symbol key.

8. Describe the difference between a primary highway, secondary highway and light duty road. What do you think these three terms mean in reference to the roads you take everyday? What type of road do you drive on most often?

Orienteering Assessment 6

Name:_____
Date:_____

For the following questions, try to remember the discussion we had about getting school measurements correctly and efficiently. **Remember to answer in complete sentences.**

1. Did you use the same measuring technique for everything you measured?

2. Pretend like you are describing to a friend outside of our class how to measure the perimeter of the school grounds. List in detail the steps you would take to make sure you have an accurate measurement of the school grounds.

3. What do you think was the hardest distance (object) to measure? Why?

4. What do you think was the easiest distance (object) to measure? Why?

Orienteering Assessment 6
Assessment (Answer Sheet)

Name:_____
Date:_____

For the following questions, try to remember the discussion we had about getting school measurements correctly and efficiently. **Remember to answer in complete sentences.**

5. Did you use the same measuring technique for everything you measured?
Yes I used the same measuring technique for everything I measured to help eliminate errors.

6. Pretend like you are describing to a friend outside of our class how to measure the perimeter of the school grounds. List in detail the steps you would take to make sure you have an accurate measurement of the school grounds.

In order to measure the school grounds, you need to pick two measurable points and measure the distance in between. Make sure those points aren't any larger than 100 feet. Then you measure a straight distance and write it down. It's best to measure twice for accuracy.

7. What do you think was the hardest distance (object) to measure? Why?

I think measuring round objects are the most challenging because there aren't any straight angles.

8. What do you think was the easiest distance (object) to measure? Why?

The easiest object to measure was the gym because there were not any obstructions in the way. It was easy to measure from one point to another.

Orienteering Assessment 7

Name:_____
Date:_____

1. Was your estimate close to the actual number of steps it took to walk the perimeter of the school grounds?

2. What information can you gain from this exercise?

3. Now, knowing the information you've learned today, how many steps do you think it takes to walk the dimensions of the gym? The next time we meet we will start our map work.

Orienteering Assessment 7
Assessment (Answer Sheet)

Name:_____
Date:_____

4. Was your estimate close to the actual number of steps it took to walk the perimeter of the school grounds?

No, my estimate of actual steps was not equivalent to the actual amount of steps it took me to walk the perimeter of the school grounds. I was off my 58 steps.

5. What information can you gain from this exercise?

The information I gained from this exercise was my stride length in accordance to actual measured distance.

6. Now, knowing the information you've learned today, how many steps do you think it takes to walk the dimensions of the gym? The next time we meet we will start our map work.

Answers will vary based on answers above and differences in gym perimeters.

Orienteering Assessment 8

Name:_____
Date:_____

Towards the end of class you should make sure you have the following “check-list” done. I will come around to make sure your maps are at least half way done, and done correctly. If you have any questions, you should ask me when I come to see your map.

- □ Is your map made to scale?

How would someone looking at your map know your map is to scale? Describe below.

- □ Does your map include symbols?

Is it clear what each symbol means? How? Describe below.

- □ Is your map easy to read?

If I had never looked at a map before and was trying to follow your map, could I do it easily without needed an explanation? Describe below.

- □ Is your map detailed? Is it attractive to the eye?

Please list the different colors on your map and what each color represents on your map in the space below.

Orienteering Assessment 8
Assessment (Answer Sheet)

Name:_____
Date:_____

Towards the end of class you should make sure you have the following “check-list” done. I will come around to make sure your maps are at least half way done, and done correctly. If you have any questions, you should ask me when I come to see your map.

- □ Is your map made to scale?

How would someone looking at your map know your map is to scale? Describe below.
Someone looking at my map would be able to know my map is to scale because there is a key of what the scale of 10 feet to 1 inch, which is located in the right hand corner.

- □ Does your map include symbols?

Is it clear what each symbol means? How? Describe below.
My map does include symbols and it is clear what each symbol means. There is a key with each object labeled and colored.

- □ Is your map easy to read?

If I had never looked at a map before and was trying to follow your map, could I do it easily without needed an explanation? Describe below.
Yes, my map is easy to read because there are objects provided on the map to help you get an understanding of your placement. Also, there is a path or direction arrow of which you should follow.

- □ Is your map detailed? Is it attractive to the eye?

Please list the different colors on your map and what each color represents on your map in the space below.
My map is detailed, I used green for trees, gray for the main building, dark green for the football field and black for the perimeter.

Orienteering Assessment 9

Name:_____
Date:_____
(The map to be used with this assessment is also the same map included with lesson 13)

1. What is the elevation north of Hermlock Road?

2. On this map how many feet of elevation change is there between each contour line.

3. What is the highest elevation on the map? How do you know?

4. How many hill tops are there?

5. Is there any flat ground on the map? How do you know?

Orienteering Assessment 9
Assessment (Answer Sheet)

Name:_____
Date:_____
(The map to be used with this assessment is also the same map included with lesson 13)

2. What is the elevation north of Hermlock Road?

The elevation is 1200 ft.

2. On this map how many feet of elevation change is there between each contour line.

About 400 ft. is the amount of feet of elevation change.

6. What is the highest elevation on the map? How do you know?

7000 ft. is the highest elevation on the map. I know this because it is the highest number listed in elevations.

7. How many hill tops are there?

There are about four hill tops located on this map.

8. Is there any flat ground on the map? How do you know?

There is flat ground on the map, it is identified by different shades of gray.

Orienteering Assessment 10

Have students explain how to measure stride lengths while demonstrating the technique. You should be observing the students ability to take correct stride lengths throughout the lesson- help those students that need it. By the end of the class period, walk around to each pair again and mark off whether they are able to take stride lengths correctly as you taught in class. Here's an example of what an assessment "check-list" would be for this lesson. Jane would have received a 2/3 with this informal assessment.

Students Name	Date Observed	Steps are counted after 3rd step	Steps are being considered in relation to time	Pedometers are being used correctly
Jane Smith	**11.28.2005**	**X**		**X**

Orienteering Assessment 11

Name:_____
Date:_____

Please fill in the following chart as you work.

Start point on map	End point on map	Estimated steps	Actual steps

1. What was something new you learned today?

2. How do you think knowing about travel time will be useful in the future?

Orienteering assessment 12
Tent assessment

Name_____ Date_____

On this piece of paper I would like for you to list five of the eight steps it takes to set up a tent properly, and three environmental factors to look out for when doing so.

<u>Tent steps</u>

1.

2.

3.

4.

5.

<u>Environmental Factors</u>

1.

2.

3.

Orienteering assessment 12
Tent assessment (Answer Sheet)

Name_____ Date_____

On this piece of paper I would like for you to list five of the eight steps it takes to set up a tent properly, and three environmental factors to look out for when doing so.

Tent steps

1. Get out of bag and lay flat.

2. Put the poles together.

3. Find where poles go/ put them in.

4. Put stakes in/ rain tarp on.

5. Take down (reverse the steps)

Environmental Factors

1. Rocks, pinecones, holes.

2. Not by campfire

3. Not under electric wires.

Orienteering assessment 13 Assessment

Name_____ Date_____

Please print the answers to the following questions.

1. Why is it important to know what a back azimuth is?

2. Describe your difficulty level when the paper bag was on your head.

Orienteering assessment 13
Assessment (Answer Sheet)

Name_____ Date_____

Please print the answers to the following questions.

1. Why is it important to know what a back azimuth is?

   Answer Example: It is important to know what a back azimuth is because if you don't have the bearings for the way back you can figure them out by knowing how to back azimuth. It will prevent you from getting lost.

2. Describe your difficulty level when the paper bag was on your head.

   Answer Example: I thought it was pretty hard with the bag on my head, but it really helped me understand the importance of a back azimuth, because I had to depend on my bearings.

Assessment 14

Rubric

Pace and Bearing Accuracy

Name of assessor: _____ Name of student being assessed: _____

	5	3	1
Bearing Accuracy	All 15 bearings were written clearly and had a number and stake letter with them.	Only some of the bearings were there, only some were numbered and had a stake letter.	Very few bearings were written down, not many numbers or stake letters.
	Nearly all the bearings were accurate and usable.	At least half the bearings were accurate and readable.	Very few bearings were accurate.
Pace Accuracy	All 15 paces were written with the bearings.	Only about half the bearings had a pace written with it.	Very few of the bearings had paces to go with them.
	Nearly all the paces were with in two of my paces.	Only about half the paces were with in two of my paces.	Very few of the paces were with in two of my paces.

TOTAL: _____

Orienteering assessment 15
Assessment

Name_____ Date_____

Now that you have completed the mazes, write a brief paragraph describing why it is important to always know where north is and the importance of knowing where north was throughout this activity.

Orienteering assessment 15
Assessment (Answer Sheet)

Name_____ Date_____

Now that you have completed the mazes, write a brief paragraph describing why it is important to always know where north is and the importance of knowing where north was throughout this activity.

ANSWER EXAMPLE: It is important to always know where north is because it helps you from getting turned around. If you always know the direction you want to be going, you can know the direction you should be traveling.

Orienteering assessment 16
Assessment

Name: _____ Date:_____

Topographical Map Final
Map to be used can be found at: http://www.fs.fed.us/r6/wenatchee/cle-elum-orv/orv-maps.html

1. About how long is Kachess Lake (including Little Kachess Lake)? (in miles)

2. Using your Cardinal directions, where is Jolly Mt. Located on the map?

3. Name 9 lakes on the map.

4. Which direction does Gale Creek flow?

5. According to the map, how high is Thorp Mt.?

6. What direction is Mt. Baldy located in reference to Swan Lake?

7. From what the map shows, how many creeks flow into Cle Elum Lake on its eastern flank?

8. What lake does French Cabin Creek flow into?

9. How far is Margaret Lake from Jolly Mt.? (in miles)

10. What lake displays two sand bars on its shores?

Orienteering assessment 16
Assessment (Answer Sheet)

Topographical Map Final

1. About how long is Kachess Lake (including Little Kachess Lake)? (in miles)
    9-10.5 miles

2. Using your Cardinal directions, where is Jolly Mtn. Located on the map?
    NW corner

3. Name 9 lakes on the map.
    1. Magaret Lake 2. Swan Lake 3. Tock Hobbit Lake 4. Bake Lake 5. Swamp Lake 6. Kachess Lake 7. Cle Elum Lake 8. Thorp Lake 9. Little Joe Lake

4. Which direction does Gale Creek flow?
    West to East

5. According to the map, how high is Thorp Mtn.?
    1750 ft.

6. What direction is Mt. Baldy located in reference to Swan Lake?
    Northwest

7. From what the map shows, how many creeks flow into Cle Elum Lake on its eastern flank?
    Seven

8. What lake does French Cabin Creek flow into?
    Cle Elum Lake

9. How far is Margaret Lake from Jolly Mtn.? (in miles)
    14-14.5 miles

10. What lake displays two sand bars on its shores?
    Cle Elum Lake